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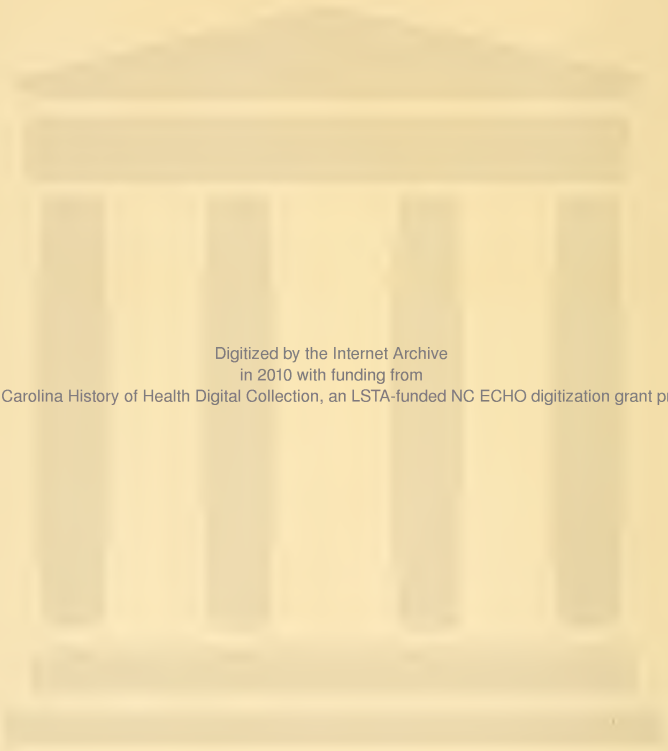

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Charlotte Medical Journal.

A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 76
NUMBER 1

Charlotte, N. C., July, 1917.

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The Charlotte Medical Journal

VOL. LXXVI CHARLOTTE, N. C., JULY, 1917. No.1

MEDICINE AS IT USED TO BE AND IS TODAY.*

By J. N. Upshur, M. D., Richmond, Va.

In this time of advanced medical progress in every department of medical science, with the accurate means and appliances for investigating disease conditions and arriving at an accurate diagnosis, many, if not most, men in the profession of this day, have little conception of the conditions existing, and the poor facilities at the command of the profession in the earlier days for accurate investigation of disease. Even the possibilities of the microscope and chemistry were limited, and because of this, errors in diagnosis were common and not appreciated even by the most progressive men earnestly and conscientiously seeking for the truth. To a man who learned his profession when humeral pathology prevailed, and whose foundation was laid in those principles which succeeding years have proven to be errors, and who has seen the introduction of the microscope, the hypodermic syringe, the X-ray, and very many efficient agents added to the Materia Medica. We had much to learn about temperature, when the thermometer was first used, erroneous conclusions were arrived at, less accurate than the impression from educated touch. The large number of drugs discovered and standardized and the increasingly accurate knowledge of their physiological action, one considers with wonder and admiration the good work done by ye doctor of ye olden time. His medical intuition clarified his judgment, the specialist was yet undiscovered, and the doctor was an all round medical man, surgeon, obstetrician, and gynaecologist. The midwife was a character in every community, looked upon as being learned and wise, even if she did make the woman blow in a bottle to deliver the placenta. The days when exposure to fresh air was considered little less than murder, and the sphere of the surgeon was limited to very narrow bounds, most operations in civil practice being done in the home of the patient, a crudely arranged table, family wash bowl, water out of the well or faucet, no cleansing of the site of operation, surgeon not even washing his hands often, and dressings, any clean rags or bandages home made. The writer listened for two weeks in his student days to lectures on the varieties of ulcer and the commendation of laudable pus and the condemnation of all other kinds. He recalls an operation done in his young days, when called on the street to see a negro man 60 years old suffering with strangulated hernia. The patient was in a wooden shanty, one window, so dirty that you could not see through it into the street, a single wooden bed, filthy, shuck mattress so dirty that the stripes in the tick could not be seen, the family tin basin, aged to the point of rust, the vegetable sponge of that day, a grooved director and a knife from a pocket case. About six feet of bowel was returned, and cold water dressing of rags applied. Result, healed in ten days by first intention, not a drop of pus and the man back at work. Explanation, oh ye rigid asepsis of the 20th century! when thieves fall out honest men get their dues, evidently there were so many bugs that they fell out among themselves and the game escaped. The contrast in the methods of medical education in the earlier days and today is very striking. Requirements then, reading for a year in some doctor's office, attendance two years on medical lectires, dissecting one year, length of session five months, no laboratory training, two clinics a week, one medical, one surgical, usually held the same day. Haemostatic forceps unknown, blood vessels when cut controlled by pressure of assistant's fingers, or catching with a tenaculum (a sharp hook) and ligating with silk. A case in Howard's Grove Hospital (Freedman's Bureau) diagnosed by three competent surgeons as ovarian tumor, operation determnied on, but patient died in ten days, before it could be done. Autopsy, intensely thickened omentum filled with small cells containing fluid and adherent to the abdominal walls, tubercle in every organ and tissue of the body except the uterus and ovaries which were perfectly healthy. The abdominal aorta was ligated for the first time in this country by Dr. Hunter McGuire (8th operation in the history of medicine), subject a negro man, lesion aneurism of the bifurcation of the abdominal aorta including the left common illiac. The writer

*Read at meeting of the Richmond Academy of Medicine and Surgery April 10, 1917.

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gave the chloroform, and subsequently wrote the history of the case. (See Journal of the American Medical Sciences for October, 1868). At that time entering the abdomen was considered little short of murder. Dr. McGuire did a preliminary operation on a cadaver, making an incision in the left side from the twelfth rib to the crest of the ilium, approaching the aorta from behind the peritoneum. When the case was operated on a large network of vessels through which the collateral circulation had been established were cut with copious haemorrhage resulting. The urgency of the case was such that an incision was made across the abdomen, the aneurism pulsated against the finger of the operator or assistant, and enormous haemorrhage resulted. A ligature was passed around the aorta catching the left ureter in its bite, facts revealed at the autopsy, the patient lived eight hours. The writer's hospital training was in a Freedman's Bureau Hospital immediately succeeding the Civil War, nearly every patient who died came to autopsy. The writer did with his own hands or was present at from two hundred and fifty to three hundred autopsies. This is mentioned to record two facts. It was the very rare exception not to find tubercle some where, even when it had not been previously suspected, and it was a very common thing to find gall stones, one or more in the gall bladder, and yet the writer does not recall that he saw a single case of gall stone colic in the fourteen months that he spent in the hospital. A significant fact in the first of these conditions is that before the Civil War tuberculous disease of the lungs was an unheard of thing in the pure blooded negro, only a mild tubercular adenitis in the neck and it was looked on as merely a blemish, harmless except so far as it impaired the saleable value of the subject, if he should be offered for sale. This affection was commonly known as scrofula or king's evil. In the early days of aseptic surgery, subsequent to the passing of Listerism the writer did an operation in an up-to-date hospital of that day, for the cure of a hernia persisting after an operation for strangulation, subject woman. She could not be prevented from pushing her hand under the bandage, about the site of the wound. Result, death in six days from septic peritonitis. Then surgery passed through all the stages of aseptic development, the various complicated and cumberous methods of preparation for operation, chemicals and soaps, aseptic poultices of all kinds, applied ad nauseam; until the light of a better day dawned, and iodine came to its own, and is recognized today as the efficient and life saving agent of modern surgery, cleanliness of operator, assistants and nurses being always emphasized. But these up-to-date conditions of the present day have their drawbacks. Too many men want to be surgeons, the glamour of rapidly rising reputation and large fees like an ignis fatuous leads them on, and in the slough of incompetency human life is snuffed out, because of poor and unnecessary work. How many appendices rest in a bottle which could plead not guilty, and the patient passes into other hands not cured of the disease, and worse off for the surgical experience. When diagnosis is accurate and operation necessary, in the hands of the true surgeon, it is a boon to humanity, and its life-saving a positive asset to the body politic, but God save us all from the **cutter.** Nor is the present day contrast less strong with other departments of medicine. The sanguinary days, when the first thing the doctor did was to tie up the patient's arm and bleed almost ad deliquium animi, then a dose of tartar emetic or ipecac till he almost threw up his immortal soul, followed by ten and ten (grs. x each of calomel and jalap), and the doctor returned the next day and asked the patient what is the matter with you? The crude knowledge of auscultation and percussion, illustrated by an incident in the lectures on the subject by my old professor, the late Dr. David H. Tucker, he said "Gentlemen auscultation is mediate and immediate; immediate through a crack. They have taken up auscultation is when a stethoscope is used; a stethoscope, gentlemen, is a hollow wooden tube with a sick man at one end and a dam fool at the other." The courtesy of modern days would forbid such comment, but what of errors often made in what is heard, a bruit in the heart diagnosed, when the blowing sound is in the thin overlapping border of the lung and the heart is innocent of any lesion. Diagnosis of serious heart trouble when distressing palpitation exists due to some reflex cause, or distension of the stomach with gas, crowding the diaphragm and thus interfering with heart action. The early days of gynaecology, with the one cylindrical speculum, the common diagnosis of ulcer of the os, later knowledge showing the lesion to be an old cervical laceration, and the periodical, never curing, never ending application of nitrate of silver, and douches multitudinous and innocent of benefit, except the profound

impression on the mind of the patient, and she was literally a most valuable asset to the doctor. And oh, ye vetran pessaries, the monuments of ignorance, of all kinds of shapes and materials, not the faintest idea in the mind of the doctor as to why she had a misplacement of the womb. A better day for her dawned and its understanding came after wanderings through many obscure labrynths, and like the woman in the Bible many things had been suffered from many physicians. A doctor, an old teacher of the writer, told him he had applied a glass ball pessary to keep up a procidentia womb, the lady acocmpanied him to the door when he left, and politely bowing good morning the pessary dropped out and rolled after him down the steps. And what of the advances from those dark days, since we have learned more of pathology and become more savingly acquainted with the internal anatomy of the pelvic organs. Cures of what was once the impossible are made every day and life saved. In skillful hands, but here she suffers, when fools rush in where angels fear to tread, and when she finally lands in skillful hands, the task is there of not only curing the disease, but the consequences engrafted on it by his predecessors.

Obstetrics of ye olden time, mortality high, as compared with the present day, fresh air and sunlight eliminated from the lying in room as a menace to life, surgical cleanliness unknown, vulva systematically smeared with hog's lard, the nurse said to take the soreness out. The obstetrician with unwashed hands, nonsterilized instruments, puerperal sepsis rampant, from all causes. Gonorrhoea, supposed to be innocently local, and previous infection of the man before marriage not appreciated as a menace to the health and life of the innocent and trusting wife, who believed her husband to be a veritable Joseph, and subsequently suffered for her blind faith. The menace fully appreciated at the present day, but does the profession with full knowledge of the disastrous consequences, faithfully, courageously, honestly, and honorably do its duty by insisting in season and out, on the single standard for boys as well as girls, impressing on parents the supreme necessity, from the standpoint of physical welfare, if not moral. True eugenics, in the hands of the profession is the keystone of the arch builded by religion, virtue, fair and honorable dealing, purity and love.

In the olden time the month of June was looked upon with fear and trembling by parents, and anticipation of difficult and often unsuccessful work for the doctor, because of the frightful mortality to infants and young children from the great prevalence of so called cholera infantum, the prevalence of digestive disturbance, known as ileo-colitis, when medication of all kinds was resorted to. Diet without the condiment of hard common sense, and the doctor was often in the same predicament as the Irishman, who sent in a bill, "To curing your honor's cow till she died." But medical progress by enlightenment which it brought solved the problem and pediatrics was born, and a true knowledge of infantile dietetics and hygiene cleared the clouds and mists of existing ignorance and paved the way for the salvation of infancy and early childhood, banishing the ills it had suffered and enormously curtailing the mortality, till at this day we find the horror of summer time for the young child removed, proper nutrition and a common sense hygiene, laying early a firm physical foundation for future growth and development. The first specialists were the quacks, the venders of all kinds of lying nostrums, and the genito-urinary men battening and fattening on the confiding public through lying newspaper advertisements. Cancer curists, making impossible claims, false as the father of lies himself, claiming a skill which the regular physician did not possess, and like the poor these are with us still and always will be. But the crying necessity for study and practice in certain lines, the evolution and equipment of suitabe sanatoria, brought forth the legitimate child of the present day to supplant the bastard which was its predecessor. Specialism in every department of medicine and surgery is to the forefront today. But like every true thing of value, even specialism has its counterfits. The true specialist should be a man, broad minded, skilful, with diagnostic ability, which make him look at conditions in the whole body in his search for the cause of the lesion in his special line of work; why for instance assault and mistreat the stomach, which may, and often is in chronic indigestion, innocent of any pathologic condition except as the index of pelvic trouble, chronic appendicitis, gall tract disease, nervous break down, etc., etc. But there are too many counterfits, in whom the mental lobsidedness is so pronounced and the mental myopia so hopeless, that they have only the ability to see always specialism so soon after leaving college that they have not even attempted to learn general diagnosis, and would be

helpless and imbecile, even in dealing with ordinary wind colic in a baby. God save humanity from all such. So many specialists can only see to be the matter with the patient, the thing in which they specialize. In a recent article a prominent surgeon said, "that if he sent a patient to a heart specialist and he came back without having heart disease he knew it was because the doctor was out." But finally, when one has spent nearly half a century in the profession and looks back over the past years, the numerous accomplishments of science and invention, all tributes to the genius and versatility of man, he still feels a pride in the science of medicine, which silently, unobtrusively, but with a profound devotion and consecration to the saving of humanity from sickness suffering and death, has marched in the very forefront of achievement and with increasing power is proving to the world, that for diligence in research, for success in accomplishment for unselfish devotion to the service of humanity, it daily and hourly proves, "that greater love hath no man than this that a man lay down his life for his friends." Spectacular indeed are the achievements of the statesman and the soldier, popular applause or the excitement of martial music incite them to achievement. But the doctor, all a man, with a moral courage sublime and god-like, begotten by what is often his only reward, consciousness of duty faithfully performed, pursues the even tenor of his way till the human machine worn out by long responsibility and service, like the true warrior that he has been, he wraps the mantle of his couch about him and lying down as if to pleasant dreams rests peacefully from his labors, falling asleep.

Though from the hero's bleeding breast,
Freedom her pulses drew,
Though the white lillies in his crest,
Sprung from that scarlet dew,
While Valor's haughty champion waits,
Till all his scars are shewn,
Love walks unchallenged through the gates,
To sit beside the throne.

1103 West Franklin St.

SOME OBSERVATIONS REGARDING MALARIA.

By Dr. Chilton Thorington, Montgomery, Ala.

In suggesting tenable causes for increase malaria in certain localities, the following conditions, I believe, are contributory: (a) more intimate intercourse with the tropics; (b) military mobolizations, excursions, etc.; (c) the Panama Canal operations; (d) a continued indifference, or ignorance, as to proper prophylaxys. We had as well review these seriatim.

With our tropical possessions additional responsibilities arose. Craig makes the observation that 25 per cent. of all soldiers returning from the Philippines with various diseases showed malarial parasites in their blood. Randolph points out that the increasing intercourse between the United States, and foreign malarial-infected regions, especially by government officials, may lead to increas ing number of cases offering the characteristics of tropical malaria. Soldiers returning from the Spanish-American war furnished many infected mediums, and Forchheimer writes: "In certain parts of this country, where anopheles abound, and malarial diseases had practically disappeared, the latter again became endemic upon the return home from the Spanish-American war of soldiers who had malaria. This accords with my own observations, while mustering out hundreds of soldiers, at the close of this war, many of the soldiers showed distinct evidences of malarial infection, and failing to eradicate same, no doubt, started afresh endemics.

The present military excursions may also furnish fresh material for malarial infections.

By indefatigable energy, and an exact knowledge of prophylaxis, as well as all sanitary requirements, Gorgas so lowered the death rate of the canal zone, as to challenge that of most of our progressive cities. However, many of the operators found their way to the nUited States who, afterwards became infected mediums.

Indifference obstructs proper prophylactic measures more than ignorance, as an exact knowledge of the life-cycle of the mosquito admits of absolute laws for prophylaxis.

Humans, as well as other members of the animal kingdom, infected with the hemameba, through the agency of the mosquito, acting as the definitive host, and cause of blood parasite, are not regarded seriously as dangerous, but mere-

ly as having malaria.

It is not at all impossible that malaria might be conveyed, and injected into the uninfected, by mosquitoes who obtain ameba from polluted water. Cases are numerous where "chills and fever" follow encampments, and fishing trips, in unpopulous places, but near polluted water. I believe the possibility of direct infection by mosquitoes should receive more serious attention.

Prophylaxis consists of destruction of the mosquito and its larvae. Prevention of mosquito bites. Increasing the resistance of the body to the parasite. The most effectual way of killing the mosquitoes, when too numerous to be killed as individuals, as when seen resting on walls, screens, etc., is by fumigation. Sulphur and formaldehyde are the agents usually employed, however pyrethrum is of some service—not being so penetrating, and the fumes so lasting—but is open to the objection of not always killing the mosquito, but merely stunning them, and upon admitting fresh air into the room, all mosquitoes not gathered at the time may become resuscitated. A mixture of equal parts of camphor and phenol was employed during the epidemic of yellow fever in 1897. Two ounces should be boiled, in a vessel with deep sides, for every 1,000 cubic feet. This mixture has about the same lethal effect as pyrethrum with the disadvantage of being expensive, and not altogether without danger.

For the destruction of lavae it is necessary to prevent hatching of eggs by pouring out all water in receptacles in house and outside premises. I have seen larvae in vases containing water, during almost every month of the year. This shows the importance of not allowing any water to remain in vessels longer than a few days at a time, as mosquitoes will hatch out inside the house even though the house be thoroughly screened. Underhanging gutters are veritable incubators and should be prohibited by law. When for any reason they cannot be removed they should either be screened, or kerosened. Water "shut offs," when leaking should be oiled as they will breed numbers of mosquitoes.

It is not within the limits of this paprophylaxis as relates to towns, countries, or on a larger scale coasts, but as many such places are the fountain heads of mosquito breeding, should receive most careful attention, with the aid of the government. Impounded water on the Coosa river so threatened the health and lives of the people of Shelby, Chilton, Talladega and Coosa Counties, as to call for government inspection. A report by LePrince and Griffith comprises a part of Public Health Reports, Vol. 30, No. 7, Feb. 12, 1915.

Many ponds cannot be properly drained, and for such places W. P. Seal, of the Aquarium Supply Co., Delair, N. J., recommends the surface minnow (fundulus notatus). These minnows are very destructive to larvae, and in sufficient numbers will keep the water free from wigglers. The proper prophylaxis of towns can only be properly carried out by the concerted action of citizens and officials. Half way measures will in no sense suffice. It is absolutely necessary for reliable inspectors to visit frequently all premises and to point out to residents everything that could be the means of breeding mosquitoes. A few things that might escape notice are knot holes in trees, broken bottles and stopped up gutters.

The prevention of malarial parasites gaining entrance into the human body is well nigh impossible in certain localities, and is in direct proportion to one's vigilance. A change of residence may become necessary, even though it be merely from one part of a town to another, as the mosquito seldom makes long excursions, but may be conveyed by traffic. Remain indoors between sunset and sunrise in house thoroughly screened with wire not larger than 1-16 mesh. A larger mesh will not inhibit passage. It must be remembered that mosquitoes will gain entrance into a house by way of chimneys, and holes in the flooring. Sitting on the veranda under electric lights will not always afford protection against the anopholes, as the universal use of these lights might change the nocturnal habits of these pests. In very malarious districts it is wise to sleep under nettings, even though the house be thoroughly screened, as stragglers will find their way into the house, and if "loaded" will be the occasion of an attack of malarial fever in one or more members of a family.

Many ill-saved lotions are put on the market with the claim that they will prevent mosquito bites, and a cure for same should they bite notwithstanding. These lotions usually consist of certain essential oils such as pennyroyal, citronel, and lavander, dissolved in olcohol. I do not believe they accomplish the end for which they were intended, as they only hold at bay the mosquito until the lotion evaporates, thereby merely delaying the assault for a time sufficient to procure sleep.

A piece of personal prophylaxis of great importance to the physician attending a patient with malarial fever is avoiding bites found about the bed while engaged with the patient. Bites may be easily avoided about the face and hands, but it must be remembered that the anopholes lurk in dark places, therefore, many will be found under the bed and will viciously attack the ankles. I have learned by painful experience to wear high shoes all the summer, and do most heartily recommend the habit to all exposed to mosquito bites.

The diagnosis of malaria must largely rest with one's ability to discover the parasites in the blood. It is well to familiarize one's self with the parasite in fresh blood, but for rapidity, and increased likelihood of finding the parasites the stained smears are probably best.

Where the parasites are not numerous I can heartily recommend the technique used by the "thick smear" process. Blood is smeared on a slide quite thick and allowed to dry. Then stain as follows:

(a) Place slide in coplin jar.

(b) Fill with water.

(c) After 1 or 2 minutes pour off water.

(d) Fill jar with 1 per cent. HCL in 70 per cent. ethyl alcohol.

(e) After complete decolorization pour off alcohol solution, and wash slide in running water for half an hour.

(f) Pour on stain made as follows.

0.1 per cent. watery sol. eosin (yellowish) 10 c. c.; 0.1 per cent. watery sol. Azurii 10 c. c.; distilled water 40 c. c.

(g) Stain for half an hour.

(h) Wrinse in water and dry.

This metho dof staining may be found in Public Health Reports, Vol. 31, No. 13, March 31, 1916.

Many cases have to be diagnosed by clinical course of disease, as microscopical examination of blood is not convenient. Where the disease is common, ordinary attacks of tertian fever is not apt to occasion much doubt, except in a few instances, such as pyelitis, and other septic troubles, but malaria in infants may be difficult to diagnose at first. Convulsions with fever should arouse suspicion, of malaria, just as vomiting and very rapid pulse should cause us to think of scarlet fever before the eruption appears.

In absence of parasites in the blood estivo-autumnal, or irregular malaria may be suspected when there is a leucopenia, decided increase of large lymphocytes, and pigment.

Symptoms of tertian malaria are primarily chills, fever and sweating, but other symptoms are apt to be present such as headache, vomiting, etc. Where the blood cannot be examined to determine the form of malaria the alternating day periodicity will establish its identity. Estivo-autumnal and chronic malaria offer greater diagnostic difficulties, inasmuch as the disease may appear as a substratum with many other diseases, or may appear as a concomitant of other diseases. I have twice observed, and confirmed by laboratory tests, malarial fever and typhoid fever running its course at the same time in the same patient.

In the more chronic types of malaria patient spresent a most pitiable aspect, and life holds for them very few pleasures. They may be quite anemic, or yellowish tinged, large, flabby, heavily coated tongue, which refuses to be cleaned off; enlarged spleen, tender liver, and weak hearts. Patients may be troubled with indigestion, diarrhoea, and great prostration. Many of the more trivial symptoms that harass mankind are chargeable to malaria such as biliousness, general malaise, indigestion, "abdominal crises," cramps, myalgia, etc. It is also frequently responsible for neuralgia as supra-orbital, intercostal, sciatica, etc., and causes all manner of nervous manifestations ranging in severity from mere nervousness to that of neurasthenia, hysteria, and dementia. In reckoning pathology we are also to credit malaria with causing structural changes in the internal organs, such as is found in the kidneys, liver and spleen.

Treatment. As soon as a diagnosis of malarial fever is made the patient is put to bed under mosquito netting, the same as in case of yellow fever, and required to remain there at night at least, throughout the convalescence of the patient. This is a matter of great importance, as not only may the mosquitoes convey the disease to others, but may reinfect the patient by having fed on his blood in previous weeks, when same was filled with parasites.

The general treatment of malarial fever with quinine is too well known to offer much, even in way of suggestions, therefore I shall hastily review that part of treatment most likely to be overlooked.

From experiments performed, based upon observations of water amebas, it was predicted that the concentration of quinine of 1-5,000 in the blood would inhibit ameboid movement of parasites, and by estimating the total weight of the blood in the body, the required amount of quinine could be foretold. The amount

of blood in an individual weighing 130 pounds was estimated to weigh 5,000 gms. (13.5 lbs.). Therefore the amount of quinine to make this dilution would be 1 gm. (15.5 grs.).

It is quite necessary that sufficient quinine be given a sufficient length of time to destroy the parasites, or else the disease will recur, or become chronic because of insufficient treatment. It should be the physician's purpose to administer at least 30 grs. of the sulphate, or hydrochloride, daily for three or four days, and then lessen the amount according to effect of drug. Some patients do not take the sulphate, or hydrochloride, well, but may be able to take the equivalent of the above dose with hydrobromate, or with euquinine, or aristochin.

The intravenous use of quinine has some vogue, and has many advantages over the use of the drug by the mouth, but is not without its drawbacks. This treatment may appear too radical to family of patient, or may be refused by the patient, however, for hospital patients should always be used. Ten grains of quinine properly diluted should be given twice daily for a few days.

BLOOD-PRESSURE.*

By Alexander G. Brown, Jr., A. B., M. D., Associate Professor of Medicine Medical College of Virginia; Chairman Medical Staff Memorial Hospital; Physician to Virginia Hospital.

In the registered area of the United States during 1913, 87,755 persons died of heart disease, 48,755 died of cerebral hemorrhage, and 65,106 died of Bright's disease making a total of 201,616 persons dying of these diseases in a population of sixty-three million three hundred thousand people (population of registered area).

For the last 13 years, the diseases of the heart, blood vessels, and kidneys, have yearly increased their toll of death, taking an increasing number of the persons each year, while during the same period the great infections of tuberculosis, pneumonia typhoid fever, diphtheria and scarlet fever have each year killed fewer and fewer. Cancer alone, of this group of wide spread diseases of mankind, has shown a like increase in death rate with heart, kidney and vascular diseases. During this period, recognizing no doubt that the need for study of the fundamental problems of the **circulatory-disease-states** was great, the investigation of heart, blood-vessel and kidney diseases has been taken up by a large number of investigators and clinicians.

The direct relation of the subject of blood-pressure to these diseases has been recognized and instruments for its measurement in connection with them, and like conditions, have come now into general use within the past fifteen years. The blood-pressure instruments are now so generally employed by medical men that they have taken a companion place with the thermometer and stethoscope in the clinical study of disease. Many cases of heart disease, many cases of impending apoplexy, many cases of ureamia have been brought to more certain diagnosis and treatment by these instruments within recent years.

Blood pressure or "Arterial tension" is the pressure which the blood makes upon the walls of arterial blood-vessels. This may be measured by "lateral pressure" or "end pressure" method. The systolic or maximal pressure is that pressure in the aortia at the time the aortic valve is opened by from ventricular systole. The diastolic pressure is the pressure in the aorta just before the beginning of the succeeding ventricular systole and the difference between maximal and the minimum pressure is the "pulse pressure." Under normal conditions we look for a definite relation between the systolic and the diastolic pressure and also a relation between the systolic pressure and the pulse pressure. The relation of the systolic to the diastolic is about as 3 to 2 and the systolic pressure to pulse pressure is about as 3 to 1. It is accepted as safe for the pulse pressure to be from 35 to 50 m. m.

Normal blood-pressure depends upon the amount of blood-pumped into the arterial system by the heart, the resistance offered in the periphery, the elasticity of the walls, the total quantity of blood in the body and its viscosity. The cardio-vascular-visceral circulatory system, under the operation of the above factors, is adjusted by the control of a co-operative and inter-acting relation in the nervous system which slows or quickens the heart, constricts or dilates the caliber of the blood channels to meet the demands of the body in its varying environments and abnormalities. **Normal** blood pressure is influenced by age, sex, sleep, posture, time of day in relation to work, ingestion of food and fluids, smoking, etc.

And the following may be taken as expressing the age variations of normal blood-pressure:

*Read by invitation before Medical Society of District of Columbia.

Under 1 year, 71 m. m.
Under 1 year, 73 m. m.
Under 2 years, 79.3 m. m.
Under 3 years, 81 m. m.
Under 4 years 83 m. m.
Under 5 years, 86.5 m. m.
Under 6 years, 88.5 m. m.
Under 7 years, 89 m. m.
Under 8 years, 93 m. m.
Under 9 years, 100 m. m.
Under 10 years, 104 m. m.
Under 12 years, 105 m. m.
Under 20 years, (male), 120 m. m.

(For any two years of age after this add 1 m. m. to 120 m. m; so at 30 years, 125; at 60, 140.)

The blood-pressure, under influence of certain pathologic or abnormal conditions (mechanical, nervous, or toxic) continues to act normally in the body for a considerable time until the physiological factor of response to these changed conditions is exhausted. Then the blood-pressure becomes altered into an increased or diminished pressure, a high or low blood pressure, hypertension or hypotension, and as such, it becomes a symptomatic act of disease and an indicator of certain diseased states:

Nephritis and High Blood Pressure. Since 1876, when Von Bach, invented his instrument for measuring the blood-pressure, and particularly, since 1896, when Rivo Rocci, refined the instrument to meet the demands of greater accuracy, the relation of high blood pressure to nephritis has been recognized. As one attempts to read the mass of literature which has been written on this subject, one is almost inevitably, drawn into a state of confusion as the pathogenesis of this relation is described by the various authors and investigators. But in it all, a few puzzle-pieces may be found which fitted together, seem to be the beginning of a real image of truth.

Permanent hypertension in chronic nephritis is almost invariably found. Hypertrophy of the heart is also an associated pathological state. The invariableness of this association may be modified by the time and type of nephritis. It is generally conceded, that while hypetrophy is a contributary factor of hypertension, it is not the dominant factor in the production of hypertension.

Janeway has furnished an excellent review of the literature of the pathogenesis of hypertension in nephritis which may well be briefly used in this connection. The first theory explaining the hypertension in nephritis is the mechanical theory. Originally Traube and Cohnheim, sought to explain hypertension upon the basis of mechanical resistance in the peripheral circulation in the kidney. But Muller and Moss, and others by experiments showed that the embolized kidney failed to cause a rise of blood-pressure, while Alwens was able to produce only a small rise of blood-pressure by compressing the kidney in on-co-meters and the rise was too slight to lead him to think that this would produce high blood-pressure of a pathologic sort. Again, Loeb claimed that there is a direct relation between "the extent of glomerular changes and the height of the blood-pressure." But Joreo showed, in a study of serial sections from four kidney-cases that in the two cases, showing highest blood-pressure and cardiac hypertrophy, there was "least extensive" glomerulous histologic changes. Also it is commonly known that in amyloid kidney, which is primarily a disease of the glomeruli, there is no high blood-pressure and no heart hypertrophy.

However also the chemical theories of hypertension in nephirtis. Bright's original contribution in 1836, giving the results of his clinical study of one hundred cases of kidney disease, speaks of the hypertrophy of the heart as being due to "the altered quality of the blood." Since that time many experimenters have endeavored to show the relation of high blood-pressure to the retention of kidney-poisons in defective kidney function. For instance, Mosler removed both kidneys in 13 rabbits and for forty-eight hours they lived. In all but two blood-pressure was increased 15 to 25 m. m. Bradford excised one whole kidney in a large series and watched the result upon blood-pressure in the further removal of a part of the remaining kidney. When three-fourths of the remaining kidney was removed, animals died in six weeks with emaciation and asthenia: when two-thirds was removed same result was gotten, when less than two-thirds no serious disturbance was observed (factor of safety).

Then Passler and Heinke studied the relation of this diminished kidney substance to hypertension. They studied 5 dogs, taking blood-pressure in femoral artery before operation; after operation, by removing kidney substance to the point of factor of safety (by the one-third of remaining kidney) the dogs showed an average increase of blood-pressure of 21.5 m. m. Passler concludes from the extensive work in this subject, that: the heart-hypertrophy in nephritis is due to kidney disease; (2) increased irritability of vaso-constrictor apparatus producing

arterial spasm and increased resistance in aortic circulation; (3) Right auricle and right ventricle hypertrophy results from left ventricle hypertrophy; (4) "Moderate hypertension follows quantitative reduction of kidney substance to one-third of the total."

Thus it is that in renal disease hypertension arises according to Janeway's review of literature: (1) by quantitative reduction of kidney substance to the factor of safety: owing to retained poison in the blood.

(2) Unknown poisons causing disturbance of the central nervous system (ureamia) not strictly speaking mere retention of kidney solids, although it is associated with acute, sub-acute and chronic nephritis.

(3) By irritation or stimulation of vasoconstrictor mechanism by agents outside of the kidney producing general vascular changes which culminate in arteriosclerosis (primary vascular disease) and secondarily affecting the vascular mechanism of the kidney (secondary contracted kidney) resulting in high blood-pressure.

Clinically in the acute nephritis blood-pressure increase may not be constant. Sometimes it is observed but very often it is not present. When it is present, there is an associated condition of previous standing which has affected, already the vascular mechanism or there exists probably some virulent etiologic factor like tonsillitis or scarlet fever or acute areamia.

But in all types of subacute and chronic nephritis high blood-pressure is constant with its progress and concomitant cardiac hypertrophy. In the subacute and chronic glomerulo nephritis, it may be said, however, that the blood-pressure is not constantly high. This is well illustrated by a case now under my care with this type of nephritis and a systolic pressure 130, having oedema and low kidney function, albumin and casts. In chronic intestinal cases ,with cardiac hypertrophy, the pressure mounts up to 190 m. m. and to 240 m. m. and more. These are the primary contracted kidney, while, in the secondary contracted kidney, with like cardiac hypertrophy, the hypertension will not be so great. Such cases may give cerebral or cardiac symptoms. Apoplexy, angina pectoris, cardiac dilatation may characterize them. The ureamic hypertension cases also are marked by high records.

Arteriosclerosis and High Blood Pressure. These cases are usually seen in the middle aged. The heart and arterial structure show degenerative processes. The blood-pressure is increased from 150 to 170 m. m. and more.

A French clinician has divided arteriosclerosis into four stages, which seems to place the several aspects of the disease in convenient form for our considera. tion.*

1. **The Arterial Stage.**—By some this is called the stage of presclerosis, latent sclerosis or functional sclerosis. It is characterized by contraction of the arteries and by more or less spasm in the arterial wall, due to the toxins in the blood. It is held that successive repetition of such accumulation of toxins in the blood-stream circulating for a long time in direct contact with the intima of the arterial wall excites that structure, and, later, the medial coat, to functional contraction. This abnormal contraction of the arterial wall is followed, in due course of time, by a superelevation of tension; at first more or less temporary, or transitory; later, more constant. Hypertension thus begun, with the intoxication, is productive of fixed arterial changes in the vessel wall. That interesting series of experiments of Lustig, who, after having excluded all other possible factors, found that the blood-pressure was increased by beef broth from 5 to 10 m. m. Hg in persons with healthy arteries and hearts, seems to confirm this view. These toxic substances cause contraction of the arteries up to the size of the brachial; the effect of the hypertension on the arterial tree leads to excessive tension in the aorta, and consequently the systolic action of the heart is accentuated. Increased cardiac activity, restricted visceral circulation and contraction in the arterial mains can mean only structural hypertrophy to heart and vessels to compensate for these abnormal states. To epitomize the factors of the stage of presclerosis four groups of symptoms may be mentioned —symptoms by intoxication, arterial hypertension, miopragia and intermittent claudication.

2. **The Stage of Cardioarteriosclerosis.** —This is characterized by the ingrafting of the organic changes in the arterial walls, by the functional spasm, with resultant arterial stenosis. The concomitant effect of renal insufficiency and myocardial degeneration, due to endarteritis in the vascular walls of these organs, is to cause increased intoxication on the one hand and degeneration of the coronarv field on the other. In this form arteriosclerosis shows groups of symptoms centering about one of several regions. With the permanent hypertension and cardiac hypertrophy with or without palpable

hardening in external arteries, with or without marked symptoms of nephritis, with or without evidences of marked intoxication, the syndromes, which may characterize this evolution of arteriosclerosis, are as interesting as they are varied, be they cerebral, cardiac, renal or splanchnic. In this stage, toward its close, the grave terminations are asytole, cerebral hemorrhage, uremia ,etc.

3. The Mitroarterial Stage.—This stage in the clinical evolution of arteriosclerosis is characterized by dilatation of the cardiac cavities, frequently of the orifices, by a lowering of the arterial tension, by a tendency to edema, by hydrops, by congestion of the organs. It is what the French call the mitralization of the disease.

4. The Cardiectatic Stage.—This is characterized by marked dilatation of the heart, edema, low blood-pressure, firm, irreducible dropsy of extremities, dropsy of abdomen, right hydrothorax, edematous congestion of lungs, and passive congestion of the liver, etc.

In all these types the kidney shows an association, probably secondary atrophy, with little albumin and few casts. The blood pressure, as long as the heart maintains competency, usual is high. The stages run into one another, and make a composite picture in which a vicious circle is formed with kidney and heart yielding to the diseased vessels to bring patient to a fatal termination.

High blood-pressure is associated clinically with fracture of skull, rapidly growing tumors of the brain, meningitis, etc.

Heart Cases With High Blod Pressure. (1) Aortic Regurgitation; (2) Angina Pectoris; (3) Adams-Stokes Syndrome.

Puerperae Eclampsia and High Blood-Pressure: (1) A high blood-pressure is uniformly found in every case of actual eclampsia (average, 190 m. m. Hg); (2) In the last half of pregnancy a constantly rising blood-pressure is an omnious sign of toxemia and it may antedate albuminuria; (3) Blood-pressure reading in pregnancy about 120 to 130 may occasion no alarm; above 130 to 150, should stimulate active and constant interest; above 150 must be taken as a dangerous zone in pregant women; (4) There is a second fall of blood-pressure following birth of the child, with a second rebound to near original height, and then a gradual but steady fall until normal is reached, 3 to 7 days after delivery.

Intra-cranial States With High Blood-Pressure: Meningitis, apoplexy, cerebral thombus, fracture of the skull, intra cranial hemorrhages, rapidly growing brain tumors, Jacksonia Epilepsy. In this group blood-pressure may show its greatest manifestation—reaching 300 m. m. Hg with a minimum pressure 160 m. m. Hg. with slow going pulse rate, about 60. This is thought to be due, according to Cushing, to action of the vaso contractor fibers and sympathetic cardiac acceleration endeavoring to overcome the intra cranial omaemia, resulting from intracranial pressure, by raising blood-pressure to high degrees. In such cases, of course, it is altogether contrary to safe therapy to endeavor to lower the pressure by use of the nitrites or venesector, but is thoroughly in accord with the autonomic action of the compensatory efforts of cardio-vascular system to use atropine to paralyze the vagus influence upon the heart and thereby permit the free action of the acceleration sympathetic impulses upon the heart. Such a state of intra-cranial and blood-pressure may further arrested by lumbar puncture, which directly affords a fall of intra-skull pressure.

Vascular Crises and High Blood-Pressure. These cases are characterized by what is called vascular crises wherein the vaso-contractor fibres are stimulated by some maximum dose of toxin or some geneal spasmatic action of the constrictor fibres either centrally, through glands of internal secretion, or retained irritant vascular toxins. In this group may be placed ureamic cases; certain stages or types of arteriosclerosis, particularly with abdominal symptoms (agina abdominus and intermittent clandication), and with cardiac symptom (angina pectoris); vascular crises of tabetic cases.

Exophthalmic Goitre (Graves disease), after the cardiac hypertrophy has reached a maximum degree is characterized during this stage of the disease by high blood pressure, ranging from 140 to 180 m. m., with a pulse pressure 30 to 50 m. m., and a pulse rate 120 and more. The blood-pressure falls as the toxemia produces degeneration of the heart muscle and vasoparesis of the vascular walls.

Cyanosis State in Heart Failure and High Blood Pressure. The blood-pressure in these cases overloaded with CO_2, which paralyzes the vagus, leaving acclerator fibres of heart to act. This increases the pulse rate, raises blood pressure and hastens the heart to next stage of impending death preceded by rapid fall of pressure and shows heart action. (See Hirschfelder).

Hypotension.

The standard of hypotension varies and no definite figure can be given. One

observer gives the subnormal pressure at 100 m. m. Hg (R. R. 5 c. m.) and 90 m. m. Hg. (12 c. M.). Others place the figure at any systolic pressure below 120 m. m. Hg. This is purely arbitrary and no fixed figure can be given as expressing a state of hypotension. However, in mature adult cases which persistently show a reading below 120-110 m. m. Hg. systolic pressure, one may consider as subnormal. It is not proper to jump to the opinion, in cases, showing slight reduction of pressure, that it is a serious, abnormal or dangerous condition. But it is proper in connection with the symptoms of constant subnormal blood-pressure, to investigate and study the patient from this point of view.

The field of study in cases of well established subnormal blood-pressure is rather well defined and the clinical possibilities in hypotension may usually be brought to light.

There is one group that particularly appeals to me, under the influence of a group of cases that have recently presented themselves. This is the cases of adrenal insufficiency or hypo-adrenalism. A case, now under observation, which gave history of appendectomy, 7 years ago (age 35, white, female, without previous ill health), had had within the previous 6 months a loss of 30 pounds in weight, a number of cataleptic seizures with suspension of consciousness for hours, with asthmatic breathing, with angio-neurotic congestions of the mucosa, in the nose and throat, with paresthesia, numbness, prickling formication, etc.

X-ray examinations of heart, lungs, stomach and intestines (except for a ptosis of stomach and intestines) were negative; physical and laboratory examinations were negative; blood-pressure 100 m. m. Hg. during an attack 90 m. m. Hg. History of prolonged grief from death of father and brother marked the beginning and progress of asthenia and faintness in this case.

This case represents apparently a large group in which gastro intestinal stasis, accompanied by the insufficiency of the adrenalin substance necessary to maintain a proper tonus in the splanchnic circulation exists. This case yielded to strapping of the abdomen with adhesive straps and feeding supra-renal substance.

Another group of cases of hypotension is found in the infections.

Bacterial invasion of the body usually produces lowering of the blood pressure. This is particularly noticeable in typhoid fever. In this disease the blood-pressure may reach 65 m. m. Hg., while it is usually 100-120-to 90 m. m. Hg. systolic. In meningitis alone of the infectious diseases, is blood-pressure increased; this is probably due to the increase intra-cranial pressure. In diphtheria, scarlet fever, measles and rheumatic fever the systolic pressure is below normal and usually ranges about 100 m. m .Hg. Low blood-pressure may be seen also in cases of obscure local infections of long duration. In some of these cases, the systolic pressure is decreased unless nephritis is concomitant. In chronic diseases, as tuberculosis, Addison's disease, terminal state of syphilis, carcinoma, Diabetes Mellitis low blood-pressure readings are found.

Hypotension is observed also in failing cardio-rena anld cardio-vascular diseases as before observed and when it persistently continues it is, of course, an omnious sign. Likewise in the so-called neurotic or functional heart-cases, during the late manifestation, hypotension is found.

Further, certain states of the blood are characterized by subnormal blood-pressure. This is notably true in anemias-primary and secondary. It is also observed in amyloid disease of the kidney and in the terminal or final stages of prior per to discuss the engineering features of Bright's disease. The influence of pain and shock in surgical practice is now generally recognized in the production of low blood-pressure and not a few surgeons look with concern upon the register of blood-pressure apparatus in their work. In the presence of an internal hemorrhage the gradually falling of the blood-pressure, with associate increase of pulse rate is found. In alcohol delirium or coma the blood-pressure is low while in coma of ureamia and cerebral hemorrhage the pressure is increased.

Pleurisy with effusion and percordite with dropsical accumulations in thorax or abdomen are accompanied by low blood-pressure. Chronic wasting diseases, cancer, phthisics, anemias, in bronchal degenerative stages are accompanied by low pressure.

Acute Cadiac Diseases, as endocordite and acute dilatation of the heart from strain, are associated with low pressure as are diarrhea, dysentery, exhausting purgation and vomiting.

1135 W. Franklin St., Richmond, Va.

THE USE OF COAGULEN IN HEMOPHILIA. REPORT OF A CASE.

By James W. Davis, M. D., Statesville, N. C.

There are at times hemorrhages that cannot be controlled by the usual means, and of this type of cases, hemophilia is the most serious condition with which we have to deal.

I have used Coagulen in a number of cases but the best result has been in a case of hemophilia. The results are so marked that I am indeed glad to report this case:

Patient—Girl; 9 years of age. Since four years of age parents have noticed that the girl bled profusely from the slightest scratch. In addition to this, she had occasional hemorrhage from different parts of the body. The first severe hemorrhage was from the nose, lasting several days. Later there was bleeding from the gums, then a few months later, profuse hematuria which persisted for a week.

The family history was negative as to bleeders.

The physical examination of the child was negative except for the marked anemia and weakness due to loss of blood.

The bleeding began four days before admission, At first this was slight but a few hours before admission became very profuse, a large amount of blood was lost and the bleeding could not be controlled by local applications and packing.

Three grams of Coagulen, in normal salt solution, was given intravenously. Soon after this the hemorrhage ceased. Later, a transfusion of blood by the Kimpton-Brown method was given, the father being the donor.

The patient made an uneventful recovery and was discharged.

More than a year has elapsed since Coagulen was given and during this time there have been a number of slight hemorrhages, all of which were easily relieved by local treatment. There has also been one attack of purpura which persisted for a week or more. During this time the patient has grown rapidly and has partly recovered from the tendency to bleed at the slightest provocation. The parents have moved near the hospital and any further developments will be reported later.

Conclusions: While only from a good number of cases treated under varying conditions and observed over a long period of time can accurate conclusions be drawn, yet there is every indication that Coagulen is of value in the treatment of hemorrhage due to imperfect coagulability of the blood. Its action is probably more or less transient but by supplying temporarily certain elements that are lacking in the process of coagulation, fatal hemorrhage may be prevented.

VACCINE IN TYPHOID THERAPY.

By L. H. Webb, Chapel Hill, N. C.

Typhoid fever is one of the most widespread of the infectious diseases. It prevails more or less in all countries, in the tropics, in the temperate and frigid zones, at the sea level and in the mountains; in the city and in the rural districts. Everywhere that man exists where local sanitary conditions do not favor its dissemination. No race of people is known to be immune to its ravages. According to the United States Census Report for 1900, the typhoid death rate in this country was 46½ per 100,000 population. In 1908 the toll from typhoid fever was 35,000 in the United States.

Vaccination against typhoid fever is now an established procedure. Its use began in 1896 when Pheiffer nd oKlle, and independently Wright, demonstrated that persons injected with killed typhoid baccillie develop the same antibodies in their bodies as found in the recovered cases of typhoid. Wright then introduced its use into the British Army, which led to its introduction in other countries. In 1908 Major Russell of the United States Army was delegated to investigate the subject. He visited oLndon and Berlin for the purposes of studying the methods already in use. When he came back to this country he devised a method which was a combination of the British and German methods. Typhoid vaccination was started voluntarily in the United States Army in 1909, the death rate per thousand that year being 0.28 among enlisted men. In the spring, 1911, vaccination was made compulsory for all members of the service under 45 years of age and the death rate per thousand dropped 0.03 in 1912. There were no deaths in the army in 1913 and only three cases among recruits. The results in the army of a hundred thousand men and only three cases of typhoid against a civil death rate of 16.5 per cent. for the registration area of the United States for 1912 were startling. The results of the use of typhoid vaccine on the troops stationed on the Mexican border in the spring of 1911 were hearalded by the lay and medical press throughout the country and the evidence being so conclusive; only one case (an unvaccinated teamster) among 23,000 troops, that the progressive phy-

sicians all over the country began to use and advocate typhoid immunization. Being struck by the results I obtained in 1911 by protective immunization and being overwhelmed by the testimony of the best investigators in this and other countries of the results with immunization I decided to use typhoid vaccine in my cases as a therapeutic measure and since early 1912 I have used vaccine in 17 cases which I had in my practice during 1912, 1913, 1914, and 1915. Fortunately during 1916 owing to the fact that the United States Public Health Service conducted a sanitary campaig nin Orange County in 1915, neither I or my brother physicians in Chapel Hill saw any cases of typhoid. In my series of 17 cases were 9 whites and 8 negroes, 11 males and 2 females, 15 adults and 2 children, age sof cases ranged from 8 to 60 years, total per day for all the cases was 408 days, average length of fever 24 days, which is good compared to the average time fever persists in the ordinary cases of 30 days, making the time of fever 6 days less than the number of days fever persists in the ordinary cases, shortest time fever persisted 6 days, longest time 42 days. Complications: 2 cases had slight hemorrhages in the fourth week, one mild case of phlebitis in the case that persisted for 42 days. This same case was one of the two hemorrhage cases. In only three cases any marked delirium. In two of the series I do not think that any of the symptoms were ameliorated any by the use of vaccine. Both these cases were seen near end of second week and only a few small doses of the vaccine were administered, of course there is a possibility of these cases being mixed para-typhoid infections. The ordinary methods of treating fever were employed besides the vaccine, namely; rest in bed, baths, soft and liquid diet, plenty of water and drugs only administered, symptomatically indicated. There were no deaths in the series. All cases were clinical typhoid. Widal only made use of in two cases, both positive. Dosage of vaccine ranged from 500 million to 1,000 million; stock vaccine supplied by Mulford and the State Laboratory of Hygiene were used. Dosage and intervals of administration depending upon the time of illness, reactions to vaccine and symptoms. The importance of small doses of vaccine, such as would give the maximum opsonic response, and the necessity of giving successive doses at sufficient intervals of time to allow the development of the maximum reaction from the previous inoculation, were emphasized by Wright. Every case should be carefully studied individually; just as in the use of drugs; and the size, number, and frequency of administration of vaccine adapted to the individual case.

The tendency of all modern therapy of infectious diseases is toward the perfection of specific measures which will counteract the infectious agent.

When vaccines are used the treatment of disease it is for the purpose of stimulating the patient's tissue cells to produce larger numbers of immune bodies than the cells have been able themselves to generate under the stimulus of such a slow infection as typhoid. The tissue cells in the infected area are so intoxicated from the foreign substances produced by the infection, that they are not able to turn out antibodies in sufficient numbers to overcom ethe disease. The increase of antibodies following the administration of typhoid vaccine early and intelligently is supposed to account for the ending by crisis seen in a few of my cases and the shortened duraation in most of the others. By stimulating the cells in all the body to produce more antibodies which are carried by the body fluids to the focus of the disease and thus aid the infected tissue cells in overcoming the infection. This I think accounts for the small percentage of hemorrhages seen in my cases, due to the fact that the ulceration did not persist long and did not become extensive. This also accounts for the low temperatures seen in my cases, because there were fewer toxins and shorter periods of infection. Watters has summarized the results obtained in the treatment of 1,120 cases, of which 158 have been treated by himself during the past six years, the mortality was 4.7 per cent. The conclusions he draws from his series was as follows: 1, the mortality was slightly lower among the patients treated by vaccines than among those who did not receive such treatment; 2, the duration of the fever was ten days less in the terated cases. There were no relapses in my series of cases. In Watters analysis of cases there were nine other observers who treated a total of 507 cases with mortality per cent. of 6.8, among this nine were Richardson's 28 cases with a mortality per cent. of zero. This is the only series besides my own with a mortality per cent. of zero that I can find. Most of the reports agree that patients treated with vaccines suffered less depression, had lower temperatures and fewer complications and consequently a lower mortality per cent. I believe there is a great field for vaccines in the treatment of the complications arising incident to convales-

cence, such as periostitis, glandular suppuration, cholecystitis with rupturre or drainage and infection of the drainage tract, appendiceal and intestinal perforation necessitating drainage, mastoiditis and cystitis due to bacillus typhosus or secondarily infecting organisms. I would think an autogenous vaccine would be better in these cases.

I cannot pass over the vast opportunity offered by vaccine for the treatment of typhoid carriers and I believe when typhoid immunization becomes universal the carrier will become practically unknown and Typhoid Mary will become a topic for ancient history instead of a headliner for the Sunday papers. Park states that "probably one in every five hundred adults who has never knowingly had typhoid fever is a typhoid carrier." I see no reason why the immunity acquired by inoculation should prevent in a large measure the perpetuation in the bodies and the development of a typhoid state. The same would hold good for typhoid convalescents who had been treated with vaccines during the attack. In some cases better results may be obtained by the use of autogenous vaccine.

Owing to the wide prevalence of para typhoid infections I believe a mixed vaccine o fequal numbers of typhoid, paratyphoid A and paratyphoid B baccilli. This method has been used extensively in the Japanese Navy with good results.

The recent adoption by physicians of the sensitized vaccine of Besredka gives hope of accomplishing more than has heretofore been accomplished with the old vaccine. The killed organisms according to this investigator, when exposed to the action of immune serum become saturated with the immune antibodies present in the serum and are thus ready for the immediate phagocytosis and digestion when injected into the patient. This preparation produces slight local or general reaction and may be given in larger doses and more frequently than the unsensitized vaccine. Besredka says that the immunizing effect becomes apparent in 48 hours.

Every physician doing general practice is familiar with the pre-typhoid stage, i. e., the patient you are called in to see, usually in summer or early autumn, who has been feeling badly for a week or so, headache, thirst, dizziness, loss of appetite, general malaise, no history of typhoid or vaccination, no chills, has a temperature of 100, full slow pulse and coated tongue and red mucous membranes. This patient says he is bilious but a good general practitioner will be on his guard from the jump and put that patient in bed and use the general precautions necessary. I have made it a general practice for the past five years to give all these cases typhoid vaccine and of course while there is no way to prove it I believe that I have aborted many cases of typhoid since I began to do this. It can do no harm in ordinary cases and possibly does good.

To summarize: The best authorities and the latest statistics agree that typhoid vaccine as a therapeutic measure is harmless, reduces the mortality, shortens the duration of the disease, lowers temperatures and lessen delirium, reduces relapses, lessens complications, reduces the number of carriers, and I may add, aborts the very mild and early cases. It is best to use a stock vaccine because time is valuable and the autogenous vaccine requires time to get, a mixed vaccine containing both typhoid and paratyphoid organisms, and in the light of the latest evidence the Besredka sensitized vaccine as it is quicker, less reaction and larger and more frequent doses can be used. I believe it the duty of our profession to advocate the immunization by vaccination of every one against typhoid and at least try vaccine as therapeutic measure in the small number of cases both positive and probable that he will have. In other words if he is well prrotect him by immunization, if he is suspicious protect him by vaccine and if he is ill at least try to save him with vaccine.

THE SLUDER OPERATION.*

By Clarence Porter Jones ,M. D., F. A. C. S., Newport News, Va.

This operation was first described by Greenfield Sluder of St. Louis, in March, 1911. Its merit was at first but little understood or appreciated; and the large majority of operators failed to get results from its trial. Then came a number of modifications of the operation and the instrument used which likewise, as a rule resulted in failure. Later it became apparent that should the principles of the original operation be strictly adhered to, it was none other than an expeditious and safe method. It bids fair to become an universal operation for enucleating the faucial tonsil.

The principles are to lift the tonisl out of its bed or fossa, about one inch up-

*Read as a part of a symposium on the tonsils before the Seaboard Medical Association of Virginia and North Carolina in session at Washington, N. C., December 21, 1916.

ward, thence about one and one-half inches forward on the alveolar eminence of the mandible; which is a bony prominence on the lower jaw opposite the root of the rear molar tooth. This anatomical marking is present in all jaws, even in early childhood. Then sever the attachment of the tonsil with a dull cutting instrument.

The Sluder instrument is really the old Mackenzie guillotine with an exceedingly strong, rigid shaft and handle, elliptical ring and dull blade, used in reversed form, i. e., the blade next to the jaw. A roomy mouth gag of the Jensen or Denhard type, and an ordinary tongue depressor is all the instruments necessary; barring a few tonsil haemostats and sponge holders.

The guillotine is passed into the mouth and made to approach the tonsil with its shaft at an angle of 45 or 50 degrees, the ring at a somewhat oblique position, its lower portion is forcibly pushed under the tonsil which is then raised up about an inch, at the same time the guillotine is rotated till the ring is perpendicular; the tonsil is now pulled forward on the alveolar eminence of the mandible, firm pressure being exerted by the instrument, holding the shaft at the same angle as on entering the mouth. With the tip of the index finger of the surgeon's other hand, the tonsil is massaged till the whole of its volume passes through the ring. Then with firm pressure on the cross bar with the thumb of both hands, the blade is shoved home. Should the last few shreds be hard to cut through, the index finger passed upward outside the ring will sever them. Upon withdrawing the guillotine, the tonsil en masse will be found enucleated with its capsule.

The results are:

1. Very moderate haemorrhage; the dull cutting blade crushes the blood vessels. The tendency to subsequent bleeding is almost nil.

2. Prompt healing, for the reason that there is less traumatism than in most any other operation for tonsillectomy.

3. Absence of scar is noted, as no other structure suffers any interference, the muscle fascia in the tonsil fossa is left in tact.

4. Speed in the operation commends it most favorably—the ether cone is withdrawn entirely and from 3 to 10 seconds is the time usually necessary for each tonsil enucleation.

3117 West Avenue, Corner Thirty Second Street.

THE USE OF ERGOT AND PITUITRIN IN OBSTETRICS.*

By Joe A. Hartsell, M. D., Concord, N. C.

The use of ergot inObstetrics dates back to the beginning of the last century, although it was known to have effect on the pregnant womb before this time, as far back as the fifteenth century, it had not come into general use. Since that time the drug has passed through the experimental stage and now has definite indications for its use, and is one of the most valuable drugs in the obstetricians armamentarium. Its chief use is after the third stage of labor to cause contraction of the uterine muscle thereby preventing postpartum hemorrhage and hastening involution. It should be given in one dram doses of the fluid extract by mouth of one c. c. of Ergot Aseptic or Ergotone hypodermically immediately after the placenta has been expelled, or after the placenta has passed the contracting portion of the uterus. The use of Ergot before the fetus has been expelled is unjustifiable except in cases of twin pregnancy after the first child has been born, as in these cases you already have a fully dilated birth canal. The daily use of Ergot for a few days after multiple pregnancy is advisable.

In Pituitrin, however, we have a much newer drug, the uses of which, generally speaking, is much less known. Pituitrin was first used in Obstetrics in 1909 and was enthusiastically taken up by the profession and used in nearl yall classes of cases before its true place in Obstetrics was determined, and as a consequence several fatalities and numerous near fatalities were reported.

Taken by mouth Pituitrin has no effect but given subcutaneously or intramuscularly it produces a rise of blood pressure from twenty to forty m. m. which lasts for a half hour or more, and unstriped muscle fibres, wherever found, are sensitized and stimulated. This action is particularly noted on the uterus causing strong, powerful contractions from three to ten minutes after injection, this effect lasting from thirty to ninety minutes depending upon the size of the dose and the individual susceptibilities of the patient. In properly selected cases, namely, multipara in the second stage of labor with the head engaged, cervix dilated and large roomy pelvis, one injection of Pituitrin will terminate labor almost like magic.

*Read before the Cabarrus County Medical Society, May 7, 1917.

Pituitrin should not be used except in the second stage of labor under the following conditions, the child should lie in the longitudinal axis ,the head or breech engaged, the cervix dilated or dilatable and no disproportion between the size of the fetus and the size of the pelvis. Given the above condition in a healthy woman whose pains are becoming gradually weaker and farther apart would be the ideal indication for the use of Pituitrin.

Pituitrin is the most powerful oxytocic we have and like all drugs which have the power for doing good when rightly used it has power for doing harm when wrongly used. The untoward effects are nausea, vomiting, vertigo and tinnitus, more frequently seen in weak anemic women. More serious results have been collapse, uterine atony and hemorrhage, contraction of the cervix, unnecessary lacerations of the cervix and vagina, fetal asphyxia, tetanus uteri and rupture of the uterus. Several cases of rupture following its use have been reported but all were due to injudiciou suse, one case had received four c. c. another had nephritis and had only been in labor three and one-half hours making good progress, another was a primipara who had been in labor for two days with cervix dilated only two fingers breadth and outward bulging of the lower uterine segment.

The most important contraindication is obstruction from any cause as, contracted pelvis, tumor, hydrocephalus, unyielding cervix or occiput posterior stationary. It is not advised in the first stage of labor and has no place in normal labor and should not be used to hurry a case along. It should not be used in the presence of marked high blood pressure particularly in eclampsia or in the toxemias of pregnancy where a rise of twenty-five to forty m. m. would prove harmful.

Its chief indication is uterine inertia in the second stage of labor with a fully dilated os and a presenting part engaged. In these cases it takes the place of forceps and gives a much better maternal prognosis than with forceps as the chances for infection are minimized. Madill and Allan collected 147 cases in which Pituitrin alone was used with four deaths or 2.7 per cent., and in 106 forcep deliveries 15 deaths or 14 per cent.

Pituitrin shortens the third stage as the placenta is expelled much more rapidly. An agreeable after effect is its favorable influence on the bladder, postnecessary. It should not be depended upon to prevent postpartum hemorrhage, partum catherterization seldom being but ergot should be given after the third stage. Foulkrod states that the only case of postpartum hemorrhage that he has seen in ten years was in a woman who had received Pituitrin alone.

As to the dose, one c. c. seems to be too large, it being better to give one-third or one-half c. c. and to repeat if necessary. When giving Pituitrin one should be prepared for an immediate delivery and the use of an anesthetic if necessary.

Pituitrin will not induce abortion or premature labor, but after some dilatation of the cervix and pains have already begun it is very useful in terminating either condition.

In an admirable article on this subject Norris draws the following conclusions:

"1. Never use Pituitrin without first exhausting your abilities in Obstetric diagnosis.

2. Multipara with relaxed birth canals offer the widest and safest field for its use.

3. For inertia in the first stage—sleep —in the advanced stage—Pituitrin.

4. The uterus after Pituitrin's tumultuous visitation needs the steadying hand of Ergot.

5. Half doses are more often to be employed than full doses."

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SOME CLINICAL OBSERVATIONS OF CANCER WITH SOME SUGGESTIONS AS TO ITS PROBABLE CAUSE AND THE IMPORTANCE OF ITS EARLY TREATMENT.

By G. N. Murphey, M. D., Paducah, Ky.

As cancer has never been proven to be a germ disease, I am of the opinion that it has its origin in a constitutional dyscrasia predisposing to it. This predisposition, I believe, is usually inherited although it is sometimes acquired. This opinion is based on the following facts: In a large majority of all cases that have come under my observation, I get a history of the disease having existed in some blood relation before them. I also find the disease much more frequent in the poor than in the rich and well-to-do classes of society. There is unquestionably some specific reason for its existence under these circumstances. In the first place, we know that predisposing causes to certain diseases are inherited, as in tuberculosis, insanity, epilepsy, hernia and many other diseases.

So, also, I believe that there is an inherited predisposition to malignancy. That predisposing cause may be anything that lowers tissue resistance below the normal standard of health. In those who have not this inheritance, but who have cancer, I believe that it is acquired; and, it is most frequent among the poor, I naturally conclude that it arises from those conditions surrounding the poor; namely, bad hygiene, food of poor quality and insufficient quantity, exposure to mechanical injuries and hardships in general. When this predisposition exists, only an exciting cause is necessary to bring the disease into existence, and this cause is usually a traumatism, either known or unknown, severe or slight, acute or chronic. I have seen cancer start from a kick or blow, from long continued pressure of the spectacles on the nose or from the friction of a suspender against a mole or wart on the shoulder or back. I have seen three cases that resulted from bee stings. In one case I saw it started from pulling a hair from a pimple on the face. Other causes from which I have seen it start are: sunburn, extraction of a tooth, the sticking of a thorn or splinter into the flesh, mole or wart cut by the razor, and the like. Occasionally it seems to be purely degeneration of the normal tissue into a malignancy without any known cause from injury. In their growth and development, cancers present many different forms and characteristics. Some begin as warts, moles or tumors and attain considereable size before ulceration shows itself. Some start as a waterblister, some as a hard lump beneath the skin, some as a crack or fissue on the hand, lip, or nipple of the female breast, some as a large mucous patch in the mucus patch in the mouth that grows as a leukoplakia ulceration. Some cancers start as ulcers with raised borders and depressed centers and some as a black or purple lump on the lip or tongue. They may be black, white or flaming red. Sometimes they begin as a brown or black scale on the skin which falls off occasionally only to be replaced by another scab. This may be repeated several times before it results in an open ulcer. Then again they grow as a knot on a tree, yet some are flat from the beginning. Others are smooth on the surface, while still others are wart-like in appearance. Some cancers grow rapidly and others grow very slowly. I have seen cancers that presented all of the above characteristics and conditions. No organ or tissue of the body is exempt from attack, neither age, nationality or sex. It does not often occur under thirty years of age, though Doctor Massey records a case of cancer in the eye of an infant only six weeks old. I have seen one case on the face of a child eight years old. The full-blooded negro is almost exempt from the disease; in my twenty-two years' experience I have seen but four cases in the black negro. Malignancy is found among men and women in about the same proportion. The face, scalp, neck and hands are more frequently attacked than any other part of the body. The breast and womb of women are more susceptible to this disease than any other organs. These are teh most common forms as I have observed them.

Diagnosis and Treatment.

After all, diagnosis an dtreatment are the most important phases of the subject. I am often surprised to see well informed and successful practitioners of medicine who know little or nothing of the diagnosis of cancer, and far less about the rational treatmen tof it. A great many of the laity do not believe that any educated doctor can cure cancer. They think that the disease must be cured by some farmer or blacksmith or carpenter by the use of domestic or Indian treatment not known to the educated physician. I know of a farmer and also a blacksmith, both of whom were treating cancer and both made the fatal mistake of placing a destructive caustic paste over the carotid artery and thus killed

their patients. One of my patients told me that a carpenter had been treating a rather extensive cancer in his mouth with caustics and had made it a great deal worse. I cured him by means of zinc needles applied with electric current. All cancers are local at the beginning and if in accessible locations ought to be cured if treated in time. The curibility of any given case of cancer depends upon its size and location. I have been treating cancer for twenty-two years and although my judgment is not infallible in regard to the curibility of every case still, in the main it is good. It is not always an easy matter to distinguish between the possible an dthe impossible, the curable and incurable.

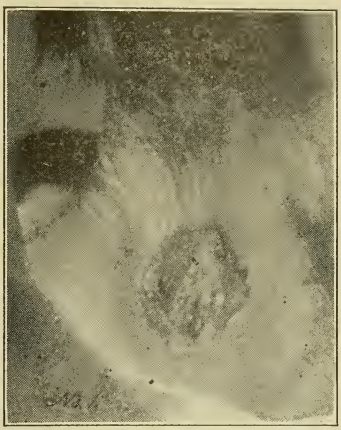
I have refused to treat many cases which I believed to be incurable. Many of these have gone to other physicians for treatment but not one of them to my knowledge has ever been cured. Considering the prevalence of cancer and the great mortality of the disease one would naturally think that everyone suffering from it would seek treatment at the earliest possible moment. But alas, such is not the case. I have known a large number of cancer victims who were well aware of their condition and yet seemed little concerned about it. This especially is true of those whose cancers were slow in their progress of development. I have also observed some of these tardy cases suddenly take on a rapid growth from some slight injury or unknown cause and destroy the patient's life in a few months, although the lesion had remained as a small insignificant sore for several years before. In other cases I have known cancer that started as a small leision advance with such rapidity as to kill the patient in a few months from its inception. Those who do not keep in touch with such things may be surprised when I state that there are about one hundred thousand deaths from cancer annually in the United States.

From my experience in treating malignancy I believe that I can state that a very large majority of all these cases that perish each year could be saved from a premature death if they would seek early treatment. It takes a good deal of experience for anyone to treat cancer successfully. It is a disease that brooks no dalliance with other things nor does it admit of any temporizing methods of treatment. The treatment must be heroic and pushed fast to its ultimatum if success is to be attained. Anyone assuming to treat cancer should be able to distinguish between the deep-seated varieties and the superficial, and push his treatment acocrdingly.

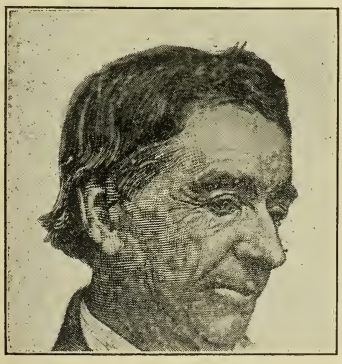
I can look back upon my earlier years of practice in cancer and recall cases that I lost that I would now have no trouble to cure. Not infrequently a short period of time either of neglect or of uncertainty on the part of the physician to know just how fast to push his treatment may lose his case to him. It is better to treat a case a little fast than too slow; no special harm can come from the former while disaster may follow the latter. One reason for patients not applying for early treatment is that they try to flatter themselves that their trouble is not malignant and they fear that if they consult a physician they will be told the true nature of the malady and that would sound like the summons of death itself. Hence they hug their delusions as long as possible. Other sufferers of cancer are led into a false security regarding their condition by the family doctor who is unable to make a diagnosis in the case and tells the patient the trouble is not cancer and to let it alone lest it become cancerous. There are still others who refuse treatment because some friend or acquaintance had been treated without benefit and they fear that they may share a like fate. My advice to al lcancer sufferers is to take early treatment if they intend to take treatment at all.

In this article I have endeavored to show a number of different forms in which I have seen cancer make its appearance. It is an insidious disease which approaches its host with stealthy strides in the guise of innocence, oftimes passing the threshold of life before its true character is recognized. Would that every competent observer would take upon himself the Christian duty of educating the public in the primary signs of cancer. In concluding this article I wish to detail a clinical case of cancer which is of more than ordinary interest because of its extent and location. This was the case of a laborer fifty years old who came for treatment July, 1913. The cancer started on the nose near the eye and when I saw it, it had invaded about one-third of the orbital cavity. This case seemed unfavorable for treatment owing to the proximity o fthe diseased tissue to the brain. However the man was anxious to take any treatment that held out hope for cure, however small. Accordingly he was chloroformed and eight zinc needles were placed deep into the diseased tissue and connected by number 32 insulated copper wire to the positive pole of the wall-plate. A pad of absorbent cotton about six

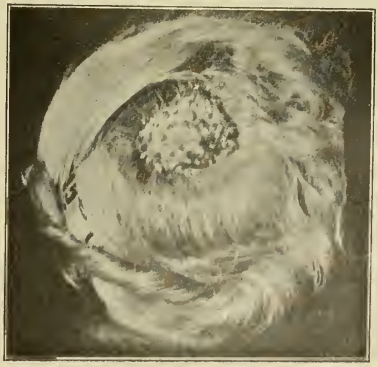
inches square wet with a solution of sodium chloride was placed at the back of his neck and connected with the negative pole in the same manner as the positive connection. 100 M. A. of current was passed for forty minutes. This destroyed most of the diseased tissue which came away in a slough in ten days. The sight of the eye was destroyed in the general results of the treatment. Three weeks later a second treatment was given differing in no way from the first, and this succeeded in destroying all the diseased tissue. Two weeks later the dead eye was removed by surgery and the patient made a spelndid recovery. Nearly four years have now elapsed with no signs of a recurrence of the disease. I know of no other method of treatment that could have been successfully employed in this case.



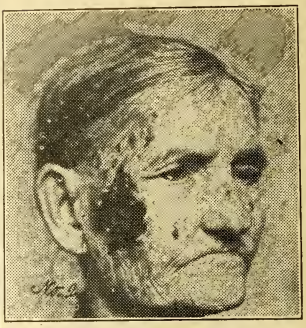
Treated with zinc needles applied with galvanic electric current. Cure complete. Cancer size of hen egg.



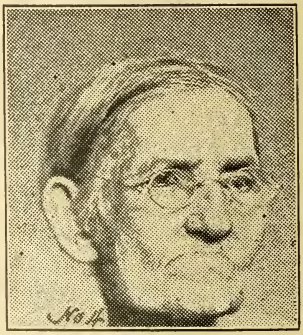
Treated with chloride of zinc paste. Cure permanent. Age of patient 79 years.



One treatment with galvanic current 30 minutes, 350 M. A. current. Cure permanent. Age of patient 70 years.



One treatment of 30 minutes with zinc needles and the the electric current cured this patient. 390 M. A. current used.



Combination treatment with the galvanic current and Bangard's paste, one treatment with each. Cure permanent. Age of patient 74 years.

AN EXPERIMENT FROM THE STANDPOINT OF APPLIED ZOOLOGY IN MEDICAL INSPECTION OF SCHOOL CHILDREN AS BASIS FOR AN INTENSIVE PUBLIC HEALTH CAMPAIGN.*

By C. W. Stiles, Professor of Zoology, U. S. Public Health Service.

The theatrical director selects, for staging, plays he thinks will appeal to his clientele and therefore will pay financially. But though his first consideration is of necessity financial in nature, he possesses a great potential influence in directing public demand along lines that he may choose. Thus, he is both a business man and an educator, and the more perfect a circle he makes between his financial and his educative functions, the more successful he is as a theatrical director.

The editor selects for publication "copy" that he thinks will appeal to his clientele and therefore will pay financially. But although his first consideration is of necessity financial in nature, he too is an educator of public taste and the more completely he wields into a circle his financial interests and his educational potentiality, the more powerful and successful an editor he becomes.

Considering the health-conserving profession in the broadest possible sense, is there any real difference in principle between the theatrical director and the editor on the one hand and men who are engaged in the health-regaining and the health-protecting arts on the other?

The health promoters **(sensu lato)** furnish to the public that particular type of health-promotion for which there is a public demand and which will pay financially. For instance, not all health promoters in a given city or county are oculists, not all gynecologists, nor pediatrists, nor public health workers, nor osteopaths, nor druggists, nor faithcurists, nor veterinarians, nor dentists, nor internists, nor surgeons, but there is a differentiation of labor, a specialization of work ,and while each one of these laborers usually has some leanings or preferences toward certain fields of health work, exactly as editors and theatrical directors have leanings toward certain types of publications and of stages, still in the last analysis the person. who has health-wares for sale, so to speak, must of necessity determine his choice of a field of labor, both as to specialty and geographic location, upon the great final question: Can I afford it or can I make it pay?

Like the editor and the theatrical director, the health-promoter has great potentiality as an educator, and the more perfectly he welds his financial and his educative elements into a circle, the greater will be his influence for good or bad—in other words, the more successful he will be from his point of view.

Today, the public demand for a higher type of medical practice and of sanitary improvement is doubtless greater than it has ever been heretofore, and this is due to the exercise of the educative function of health-promoters. Still, at least so far as sanitary improvement is concerned, the demand on the part of the public seems far less evident than the desires of the professional sanitarian, and in this connection let us pause to note that there are, in reality, relatively few professional public health officials in our country, despite the estimate that in round numbers about 40 per cent. of our deaths are preventable or postponable.

In trying to explain this apparently paradoxical condition, let it be recalled that public health work is a highly specialized branch of biology, or, if you prefer, of "medicine"—which is simply the biology of disease.

In the country at large, the public has not yet demanded much expert public health work and the medical and biological professions have not yet educated the public into the spirit of demanding good public health returns. It is the old story of demand and supply, theatrical director and play, publisher and "copy."

Do you consider these views unusual and bordering on heresy? Possibly you are right, for we are all accustomed to hear the annual addresses of presidents of medical associations when we are told, in effect, that the physicians of the land are so exceedingly and solely altruistic in their labors that they can scarcely sleep because of their anxiety to prevent as well as to cure disease.

Frankly, gentlemen, my experience has been slightly different from that of the average association president.

While I am prepared to admit—yes, more than that, to delight over—the fact that the **superior** man in medical practice is interested in public health advancement, my experience is that the **average** and the **subaverage** practitioners have about the same interest in and knowledge of public health matters as they have of ophthalmology, gynecology, psychiatry,

*The Ninth Weir Mitchell Lecture of the College of Surgeons, Philadelphia. Pa.

and all of the other specialties in the medical field, and knowing and caring as much for disease-prevention as they do for each and every one of the other numerous medical specialties, it follows, according to my—unusual and heretical view, if you will—that the average or the subaverage practitioner is just as competent in the role of a health officer as he is as an expert in any other specialized branch of medicine; further, he has not taught the public to demand better service than he himself can give and therefore the public does not, as a rule, demand better service.

One of the greatest fallacies I know of is the wide-spread and generally adopted view that the degree of Doctor of Medicine, ipso facto, endows a man with a working knowledge of the theory and practice of public health procedure, and it is somewhat difficult to escape the impression that this fallacy is one of the most serious obstacles to a better public health status.

This rather verbose introduction brings me to the first underlying principle in a public health experiment with which I have recently been connected. This principle—to my mind one of the most important in public health work under a republican form of government—is that **the development of a public health "sense" in a community is prerequisite to the best results from the expenditure of a public health appropriation**, or expressed in other words, the first point in the tactics of a health officer should be to educate the public, or in more commercial language, to create a market for his wares.

South of the Potomac and Ohio Rivers, the greatest single sanitary desideratum is a better disposal of human excrement. This measure is all the more important for us as we have down South a subtropical to a tropical climate ,a long fly season, and three races of inhabitants with different racial standards of various kinds and to a certain extent showing different degrees of susceptibility to the results of certain infections.

The tremendous problem that confronts us can be at least partially grasped when we realize that of 189,586 farm homes that have been recorded, for 501 counties in 11 states, 95,988 homes or practically 51 per cent. have no privy of any kind. The people practice promiscuouse soil pollution, the particular point for defecation being largely a matter of chance but determined to some extent by the shelter from view offered by woods, brush, or the back of the barn.

The rural schools are even worse off when it comes to soil-pollution than are the homes; and the rural churches are even worse off than the schools.

The problem before the sanitarian in an effort to change the daily habits of life of millions of our citizens and to induce them to come up to the standards of the Jews in the time of Moses is intensified by the fact that there are certain more or less logical explanations for our present conditions.

The sanitary classification of the conditions at the 189,586 homes referred to may be seen from the following table* based upon the Atlanta Conference.

	per cent.		
No. privies type A at..	100	412	41,200
No. privies type B at..	75	550	41,250
No. privies type C at..	50	692	34,600
No. privies type D at..	25	4,788	119,700
No. privies type E at..	10	87,156	871,560
No. privies type F at..	0	95,988	0
Total No. homes inspected ..		189,586	1,108,310
Sanitary index for excreta-dieposal conditions			5.8 per cent.

The system of scoring adopted at a conference in Atlanta, attended by representatives of the various units engaged in the hookworm work, is based upon the premise that the chief ways by which disease is spread from infectious excrement are by means of flies, by means of the feet of various birds and mammals, and by means seepage to of the water supply.

The city sewer, the septic tank systems, and the so-called L. R. S. with its various modifications are accepted as 100 per cent. and are classified as type A. The total absence of a privy is classified as type F with a score of zero. It is recognized that an ordinary surface-privy-open-in-back greatly decreases the danger of spreading infection by the feet of human beings, and this is classified as type E, with a score of 10 per cent.; if this privy is closed in back, the spread of infection from the privy by means of fowls and of mammals (such as the dog and the hog, but not the rat) is practically excluded, so this privy is granted a rating of 25 per cent. and placed in type D. If there is a watertight receptacle, so that the excrement can not drain from the privy into the ground and infect the water supply, this feature entitles the toilet to an additional 25 per cent. on its score. If the structure is fly-proof, so that the spread of infection from the privy by means of flies and roaches is excluded, this feature also raises the score by 25 per cent.

Thus a receptacle privy that is fly-

proof is rated as type B, with 75 per cent., and one that is either of the receptacle type or fly-proof, but which is not both, would naturally fall into type C, with a score of 50 per cent.

The 25 per cent .that I have thus far not accounted for is charged up to the fact that any type of privy that contains excrement that is more or less solid and unfermented or undisinfected, that can not be protected from ants and rats, and that later may have to be exposed or removed in bulk is attended with danger of spread of infection by all three methods (flies, vertebrates, and water) either during exposure or during or after removal.

That the Atlanta system of scoring is not as yet on the basis of a mathematical science with accuracy in the third decimal place, is self-understood, but from our present knowledge it appears to be a relatively fair and safe classification that calls for relatively little modification, so far as present day knowledge goes in regard to construction. Admittedly not absolutely faultless, and as expressing relative rather than actual mathematically exact values, it is today used by a gentlemen's agreement as a working basis.

The "pit privy" or "skid-privy" is not provided for specifically in the Atlanta rating. As spread of infection by the feet of birds and mammals (except rats) is practically excluded by this outhouse, this fact would seem to entitle it to 25 per cent.; if it were fly-proof, it would be entitled to an additional 25 per cent.

When new and in good condition it is practically on the same technical basis as a surface-privy, open or closed-in-back, as the case may be, and fly-proof or not, according to circumstances, but with these important differences, namely: (1) that in the pit privy the infection is 1 to 6 feet (according to the depth of the pit) nearer the underground water supply than is the infection in a surface privy, and the very serious point must be considered that when the pit is dug, the biologically most important and safeguarding portion of the soil, namely the upper 6 to 36 inches is removed, for it will be recalled that the free living bacteria and the free living nematodes are near the surface, and like non-poisonous snakes these free microorganisms are our friends; (2) the pit privy retains near the home for a longer period than a surface privy (that is subject to frequent cleaning) any infection from "carriers" who may use the toilet, and if the pit house is closed in back, this infection escapes the disinfecting influence of the sun's rays. It should also be mentioned that if the pit is not supported, it is likely to cave in, thus depreciating its value.

You will see, therefore, that it is difficult to classify the pit privy which apparently does not rank higher than type E, with a score of 10 per cent., if open in back, or type D 25 per cent. if closed in back; but if thoroughly fly-proof, it would be fair to add 25 per cent. to its score.

At best, the "pit" or "skid" privy is a makeshift, a permanently leaking cesspool, that leaks from 5 surfaces, namely the bottom and 4 sides; and its safety varies from about 0 to 75, possibly from lower than zero to more than 75 per cent. according to conditions, for instance, conditions of soil-formation, topography, ground water, vegetation, soil fauna, climate, and construction.

That non-descript suggested under the name of the "sanitary box," but facetiously and not incorrectly nicknamed by the laity the "umbrella privy" was not considered at the Atlanta Conference, as this sanitary foundling had not been born at that date. The knickname "umbrella privy" is traceable to the fact that if, when using it, you wish protection from the public gaze or sunshine, you must take an umbrella with you. During rainy weather the box is so wet as to be repulsive, and since it is especially in wet weather that the safeguarding influence of a privy is needed, the value of this deceptive makeshift is "X." Under some circumstances, as with automatic lids, it may be fly-proof, but this is not of much consequence if it is not used. Nor will it long remain fly-proof if not well built and protected from sun and rain. The feet of birds and mammals would not carry infection from this box-covered pit, but as experience shows that the box is used little or not at all and that promiscuous soil pollution continues on premises where the "umbrella" privy has been installed, people and animals are likely to to get infection on their feet either when going to or coming from the box, so that this element of danger is not eliminated. Like the "skid," this "umbrella" privy brings the fecal material nearer the water supply than does the surface privy, the biologically more important portion of the soil being removed, and as in case of the skid, also, it is very likely to contain water, thus forming an additional mosquito breeding place near the home; like the skid, it is not easy to protect by the use of kerosene, for this may sink into the soil; and, as it is less likely than the "skid' 'to contain fecal material, since it is less likely to be used, it is more likely than the "skid" to furnish Anopheles, as

well as Culex, and Aedes to the premises. Thus while it may reduce to some extent promiscuous soil pollution, it does so chiefly during fair weather when soil pollution is less dangerous than in wet weather, it may or may not decrease the fly danger, it increases the danger of water pollution and of carriers, and increases the mosquito problem with the danger of malaria. Frankly, I do not know how to rate it.

Before leaving this discussion, I should mention the important point that the present classification of privies is based upon constructive more than upon maintenance, and right here is the chief direction in which the Atlanta agreement is open to modification, for this agreement presupposes the highest type of maintenance in the different grades that are recognized.

This second, rather verbose chapter of my discussion, brings me to the second great principle we need in our public health work, namely, **Preach High Public Health Ideals** and do not be contented with saying to the public, in effect, "Thou shalt not steal unless thou art too lazy to work." It is self-understood that the high ideals we preached were not and will not be attained in all cases immediately, but in this we are not alone. Our colleagues, the Gentlemen of the Cloth have been repeating the Ten Commandments to the people for many centuries, and still we occasionally do hear of some one who stubs his toe on one or another of the Decalogues.

Gentlemen, as soon as one preaches and teaches low ideals, such as "umbrella privies" in sanitation or "free love" in morals, he checks the progress of the world, for he leads innocent people into a false sense of security and makes the task more difficult for other men, who first have to undo the wrong he did, before they can lead the people forward.

Turning now to a third point, I have a very sad confession to make, namely, that the dream I had some 5 to 10 years ago to the effect that the hookworm campaign would result in a great improvement in sanitation, in addition to improvement in health, has not come true. As early as three years ago, I foresaw that its influence on sanitation would not be extensive. In the first place, the American father is not going to spend $5 to $15 on a privy in order to prevent hookworm disease in his wife and children when he can have them treated for a much smaller sum of money, in fact, free of charge! It is the same, same, story, that the American father is so constituted that he would much rather have his wife and children take the anti-typhoid serum than bestir himself to decrease the danger of their becoming infected with typhoid bacilli. He would much rather pay the bill at a tuberculosis sanitarium than call a man down for spitting on the floor. This is not a characteristic to our territory south of the Potomac and the Ohio Rivers; it is as prevalent near the lakes as it is near the gulf; I have seen cases of it as highly developed in Massachusetts as in Texas. Besides the presence of this American characteristic, there were other reasons, which I will not discuss at present, that seemed to inhibit the value of the hookworm campaign as a sanitary lesson, as compared with its therapeutic influence.

As soon as I had thoroughly convinced myself on this point, and this was within two years after Mr. Rockefeller gave his splendid gift of $1,000 to start the more intensive work, I set about to find some way by which I might appeal to the American public to improve our rural sanitation.

The idea arose in my mind that "sanitary sense" could be more successfully developed in Americans if some scheme could be found that would appeal to their sentimental or esthetic side, and the evil thought occurred to me that if it were only possible to develop some method, not too expensive in its practical application to prove how high a percentage of our people can be positively demonstrated to be following a diet contaminated with human excrement, an ideal weapon would be at our disposal. So, deliberately and in cold blood, I set about to find such a method. The technique of the proof was found to be so simple as to border on the ridiculous.

Namely, the use of the eggs and the spores of certain intestinal parasites. Take, for instance, the two protozoa known as **Endamaeba coli** and **Lamblia intestinalis**, or such worms as the eelworm **(Ascaris lumbrisoides)**, the pinworm **(Oxyuris vermicularis)**, and the whipworm **(Trichuris trichiura)**. These are obligate parasites, without any free living stage; for this country, at least, they are known only for man; infection escapes normally only **per anum**, and enters normally only **per os**; **ergo**, if you find a person infected with any one of these five parasites you have positive, absolute, and incontrovertible proof that, unless something biologically unusual has occurred, that person has swallowed something that has come out of somebody's rectum, or in other words, your pa-

tient has actually eaten human excrement. It is useless, gentlemen, for us to try to escape this unappetizing conclusion. The logic is unassailable.

Further, as such minute objects as the spores of **Endamoeba** and of **Lamblia** may be carried by flies, as in fact **Lamblia** spores have been found on flies; further, also, as flies breed and feed in human excrement, and as they go from the privy to the dining room and kitchen where they interest the mother—even if perchance the father, if not baldheaded, is not interested in them—we have in this very simple method of demonstrating the fact that children have actually eaten some filth probably from somebody's privy, an argument that is surely far better than the hookworm if we wish to appeal to the mother ,and probably better if we wish to appeal to the American father, especially if he reflects that possibly he, too, has been enjoying the same diet.

In cold blood I planned to put this matter to a practical test as a campaign argument in sanitation.

By my friends to whom I unfolded my scheme it was freely prophesied that I would be lynched or at least be run out of town if I attempted to carry out the plan; but having been run out of town once, and three times having been threatened with lynching or shooting, during the early part of the hookworm work, I had acquired a certain amount of immunity to these incidences, so the risk did not seem prohibitive.

One of the first things, of course, was to have the proof that the habit of passive coprophagia applies North, East, South, and West, so that no charge could possibly be made against the people of the town selected that they were peculiar in this respect. Naturally, this proof was forthcoming as soon as its necessity was seen. Afterwards, actual tests were made in 12 different localities in 3 different states, and these tests proved that on basis of **Endamoeba** and **Lamblia** alone it can be shown that about 1 person out of every 5 has actually eaten human excrement.

The selection of a community where the test could be made was a matter of very serious thought. For this purpose, I selected a certain county in which I knew from personal experience that there was an intelligence among the people that could be relied upon, that the people were loyal to themselves, and that they would appreciate rather than resent a knowledge of actual conditions; further, there was a nascent "public health sense" in that community, and a health officer who was not only unusually progressive but is not afraid of Beelzebub, himself.

Had I been so undiplomatic as to go to this county and suggest that the people permit me to see how many of them had been eating human excrement, you can imagine how rapid progress I would have made, either in the work or more probably toward some other geographic locality. My plan was to stage a play, namely, a medical inspection of the public school children, a play that I knew would appeal to any reasonable parents; to bring in the fly, **Enedamoeba** and **Lamblia**, simply as characters in the play, and to use this play in order to convince the people of a third great principle in public health work, namely, that the **real vital public health problems of any given place can be solved right in that place itself, by the people themselves led by their local health officer**, better than by some physician sitting at the table of the Presidents Cabinet in Washington. Washington can help, it is true, but it is primarily upon the states and the local communities themselves that the responsibility of a high death rate from preventable conditions rests.

The play that was staged was staged and acted in absolutely good faith and it had its own justification quite aside from certain zoological characters in the caste.

The school children were examined physically, microscopically, and mentally. Then, when we had the results of our microscopic examinations for **Lamblia** and **Endamoeba** tabulated, a confidential letter was sent out to all the officials, the professional men ,the leading teachers, the members of the Chamber of Commerce, and of the local Woman's Club, telling them of the percentage of the local school children (namely, their sons and daughters), in who coprophagia was demonstrated, and urging them as the logical local leaders in thought and action to see that the sanitary conditions were improved so that this passive diet should stop.

About a week later, a somewhat similar letter was sent to every name in the local telephone directory. After another short lapse of time, a third, somewhat similar letter was mailed to every house on the city water system list. Then a fourth letter was sent to every house in town or in the county at which there was a privy. In all these letters the people were urged to discuss the subject with their neighbors, but not in the newspapers. When the discussion became more or less general and when the people fully understood that I could tell positively which children had eaten human excre-

ment, although, as carefully explained to them in all letters, I could not state whether the infection had come from the privy of some white or of some negro neighbor, a pictorial report was mailed to the parents of every school child who had been examined, stating whether their daughter or son was one of the children who had worms, or who had eaten human excrement, or who had enlarged tonsils, defective vision, heart murmur, poorly developed muscles, low hemoglobin or low red count, etc. You will notice from this circular that the evidence we obtained with the microscope was given to the parents in pictorial form, and that a suggestion was made in the form of a visual reminder as to the source of the filth that was consumed. This circular was really a happy thought, for the parents became interested in it and read it through from beginning to end, no matter which paragraphs were marked for their children.

We did not however foresee that some of the illiterate negroes would conclude that their children had all of these parasites, nor did it occur to us that they would hunt for hookworm eggs as large as that shown in the magnified picture.

The newspapers co-operated magnificently by remaining absolutely quiet on the subject of coprophagy. This policy seemed essential to the success of the undertaking, so we took the editors frankly into our confidence and showed them copies of the various circular letters before they were mailed.

Recall, if you please, that conditions in this county were not one iota worse than they are in hundreds of other counties in the United States. Recall, also, that the people in this county eat not one iota more human excrement than do the people in hundreds of other counties. Now what were the results?

Permit me to say that I never made a truer prophesy than that in which I assured myself that the people of the city and county of X— could be relied upon to take the proof as to the danger of insanitary conditions in the spirit in which it was laid before them, namely, absolutely in the interest of the health and lives of the women and children.

Did they lynch me or run me out of town? No.

Were they indignant? Yes, at the existence of the surface privy, but not at me.

Well, what did they do?

First of all, they developed a keen public health sense and got right back of their local health department in a way that makes some other cities and counties seem parsimonious. When the City Fathers proposed to cut the health budget by $5,000, the best citizens in town and county, the real leaders in local thought and action held a most dignified, most earnest, and most decided protest meeting, calling upon the City Council not to reduce the health appropriation. Under the leadership of one of the most progressive health officers of the South, they started in with a will to carry to completion certain policies he has been urging for several years. Specifically, mention may be made of the following points, as illustrating the spirit one now finds in County X—and its county seat.

In this city of about 31,000 inhabitants there were 3,997 privies, but within five months, this number was reduced by 1,998, as nearly as could be determined at the time.

The plumbers have worked hard. During the year 1914, they put in (according to the local health office) 1,856 new flush closets, with sewer connections, an average of 154 per month for the entire year. Then the war told on the price of cotton, and that final question "Can I afford it," stalked forth in horrible form before the work was completed throughout the city. But the City Fathers came nobly to the rescue and voted to appropriate $50,000 as a loan fund, accessible to the small property owners, specifically and solely for the purpose of installing sewer connections, and by this means it was hoped to abolish the privy within the sewer limits before summer breeds too many generations of our national insect, the common house fly, to act as carriers of human excrement from the neighbors' privies (white or negro).

The County Board of Education set an example to the entire county, North, East, South, and West, by installing at every rural county school, white or negro, an up-to-date L. R. S. privy with concrete vaults. Gentlemen, possibly you know of some other rural county that has as sanitary privy construction at all of its schools as this county has—if you do, I wish you would tell me where it is, for I do not know its name. I might mention, however, that a few days ago the neighboring county to County X— initiated a movement which it is hoped will eventually put all of its schools in the same sanitary condition, as those of County — thus showing that high standards radiate as well as do low ideals.

Furthermore, in three of the four rural townships of County X— every home, white or negro, has some kind of a privy, at least of 10 to 25 per cent. efficiency,

with some of them reaching 50 or in isolated cases even 75 or 100 per cent. efficiency.

In 23 years of public health work, I have never seen a more healthy and more rational public health sense in any community than now exists in County X—.

What accomplished these results?

First and foremost, my answer to this question is: The people themselves, under the intelligent leadership of one of the best organized departments of public health that exists in any county in the United States, and to the members of the Board, to the Health Officer and his Deputy, and to the enthusiastic sanitary police I beg to pay my most respectful compliments.

It was they—not I—who did this work. All I did was to act as a fuse to the bomb, which was fully loaded. All I did was to stage a play with the view to trying to do some public health good by a medical inspection of the school childern, and introduce as incidental characters into the play certain zoological actors—namely our national insect, the common house fly **(Musca domestica)**, and two protozoa **(Lamblia** and **Endamoeba)**—which I felt were in a position to interest the public and to arouse their intelligence to a consciousness that the life of a child—that result of 9 months of discomfort and suffering, of a few hours of the tortures of the damned, of months of watching, of many nights of nursing, is worth saving and should be judged as to its value—not in the terms of babyhood, but in the terms of maternity.

Some day, gentlemen, when the work is completed, and when County X— becomes—as it promises to be—the sanitary county of the entire South, I may perhaps tell you its true name.

GLYCOSUREA CAUSED BY AMOEBAE IN THE PANCREAS AND LIVER.

By C. G. Roehr, M. D., Fort Pierce, Fla.

Symptoms: Itching skin, especially legs and thighs; very marked loss of weight and appetite; bad taste in the mouth; imperfect vision; neuralgia.

The patient was a man, aged twenty-seven.

Findings: Stool showed amoebae with pus cells. Incomplete digestion, showed defective function of the pancreas and liver; slight jaundice. Eggs of distoma found in urine; sugar 14 per cent. (a syrup).

Deduction: Amoebae in pancreas and liver probably the etiological factor for extreme glycosurea.

Treatment: Based on this deduction, as follows: Emetine hydrochloride, hypodermatically, begun with 1-3 grain doses, increased rapidly to three grains per day, using only one-third grain for each local injection to avoid local necrosis that may result from larger doses. For the distoma, I used, hypodermatically, an infusion of Jerusalem oak, every second day, until three doses were given, then found no more distoma in urine.

After fifteen days' treatment with emetine hydrochloride the patient decided he was well and quit. My last examination showed only a trace of sugar in the urine, being reduced from 14 per cent. to less than three per cent. Three weeks later the patient reported by telephone that he was well and working and needed no more treatment.

This result, without a modification of diet and with no other medication would indicate that it is worth more study.

ACIDOSIS AND CARBON DIOXIDE TENSION OF ALVEOLAR AIR.

By Robert H. Lafferty, M. D., from the Crowell Urological Clinic, Charlotte, N. C.

Every one must have noticed in recent years the tendency to substitute the physiological for the anatomical point of view in clinical medicine. Note for example the various functional tests for the kidneys, the efforts to secure a liver functional test, which has as yet not proven entirely satisfactory, and now with the development of the knowledge of the respiratory function we have a simple method for determining the relative acidity of the blood.

For some years the subject of acidosis has been very much discussed and much work has been done along the line of determining when it exists and to what extent. By acidosis we generally mean a condition in which the alkalinity of the blood has been reduced or in other words the hydrogen—ion concentration has been increased. This does not mean a very great change comparatively for the change of the blood reaction from that of ordinary tap water to that of distilled water is incompatible with life.

Of the many methods that have been suggested and used, the analysis of the urine for these abnormal acids that have been excreted is one of the oldest but, of course, it does not give a very accurate knowledge of those retained. The de-

*Read December 4, 1916, before the Seventh District Medical Society, Monroe, N. C.

termination of the increased ammonia coefficient, the alkaline tolerance, the titratable alkalie of the blood and the determination of the H-ion concentration of the blood are all later and more or less difficult. The method of determining the amount of acidosis by the estimation carbon dioxide tension in the alveolar air gives us method that is quick, accurate and easily applicable clinically.

It has been known for some ten or twelve years that carbon dioxide was the respiratory stimulant and that its rise of two per cent. in the alveolar air will cause pulmonary ventillation to double, hence hyperpnea, and if lessened will cause apnea. In 1911 and 1912 Winterstine and Hasselbach showed that it was the increase of the H-ion concentration that caused this and that any acid in the blood would cause the hyperpnea, for example the lactic acid increase due to exercise causes the well known "air hunger" or panting that fortunately is easily overcome.

One of the most wonderful and sensative of all the many marvelous automatic regulators in the body is the regulation of the blood reaction. It is as important that the reaction of the blood be kept constant as that the temperature of the body be regulated.

Normally the H-ion concentration, i. e., the reaction, should be slightly less than that of pure water and although many acids are constantly poured into the blood from the various metabolic changes the reaction is not effected. It has been said that the amount of acid disposed of daily by one means and another is the equivalent of several hundred c. c. of cencentrated HCI. That it does not accumulate is due to two factors first the chemical composition of the blood and second the means of disposal.

Those factors in the chemical composition of the blood which control the reaction are first, the sodium bicarbonate in the plasma and cells, second, the acid and alkalie phosphates of Na and K in the red cells and third the protein and the ammonia waste products resulting from it.

The two chief means of disposal are the volitile acid by the lungs and the nonvolitile by the kidneys either as the acid or the acid salt.

Henderson calls the carbonates the first line of defense. These occur in the form of the bicarbonate of soda and a typical reaction of their action as follows:

NaHCO3 plus HCl equal Nacl plus H2O plus CO2 this CO2 is rapidly excreted by the lungs and the salt and water by the kidneys or a portion of the water and CO2 may act on the di-sodium Phosphate to form sodium diacid phosphate and more bi-carbonate as follows: Na2 HPO4 plus H2O plus CO2 equal NaH2 PO4. NaHCO3 leaving the sodium diacid phosphate to be eliminated by the kidneys and the sodium bicarbonate to neutralize more acid thus the phosphate form the second line of defense and undoubtedly some is acted on as follows by the acids:

Na2HPO HCl equal NaCl plus NaH2PO4 which gives some more salts to be eliminated by the kidneys. It might be well to mention in passing that some of the sodium chloride and perhaps other chlorides by Enzyme action gives the reverse action and form the HCI in the gastric juice which we must recognize in the acid elimination. It was also said that some of the lactic acid is eliminated by the stomach mucous membrane.

The role played by the protein (the third line of defense) is two fold. First, their power to absorb acids or alkaine when they get beyond a certain strength, and secondly, the fact that when a protein is broken down the "Building Stones," as the Germans call them ,are all very largely of the ammonia derivatives and neutralize the acids very readily. Of these "building stones" ammonia, glycocol or aminoacetic acid, are present in many giving both an acid group and an alkaline animo group in each. Some of the more complex ones are alanine ,serine, tyrosine, cystine, tryptophane, etc.

To say just exactly the point when acidosis begins is as difficult as to say when fever begins. A person may have a very slight increase of acid content without having what is generally called acidosis just as he may have one or two-tenths rise of temperature without having fever. When hyperpnea begins it is evidence that there is an excess of acid and ordinarily by throwing off an extra amount of C02 the correct reaction is restored until the acid can be eliminated as occurs in the hyperpnea following strenuous exercise.

The carbon dioxide in the blood (or what is the same in the alveolar air) is an index to the increase of the non-volitile acids of the blood for when these acids increase, as we have seen they eliminate the CC2 so an acidosis gives a low C02 tension.

If we examine the urine we may determine the acids that are excreted which method, by the way, is not very accurate. If we examine the blood we find very

slight changes toward acids and this change is more of a shift in balance between the volitile and the non-volitile acids. It is, of course, possible to examine the blood for the H-ion concentration either by the electric method or by some simpler method but it is more or less a difficult proceedure so we resort to the determination of the CO_2 tension in the alveolar air. The method as devised by Marriott is a comparatively simple and accurate proceedure.

This method comprises three proceedures: First, collecting the air, second passing into the standard solution containing the indicator, and third comparing with the standards that are graduated in CO_2 tension in m. m.

It is not necessary in this place to describe the method of making the standard solutions. These are placed on the market in special tubes and keep indefinitely.

The method of securing the specimen is probably the most difficult part of the proceedure especially in patients that are comatose or in infants. For other patients a rubber bag holding 1000 c. c. is filled with air and the patient allowed to breathe into it four times in 20 seconds then immediately make the determination since the CC_2 may escape through the rubber. Special masks have been prepared for the other patients and none as yet is perfectly satisfactory although one can be very easily improvised that will give results.

Second. Having obtained the specimen of air the next proceedure is to allow this air to pass through the solution of sodium carbonate or bicarbonate of definite strength which contains the indicator Phenolsulphonephthalein until the color is constant then it is read immediately in the colorimeter. High tension CO_2 changes the solution strongly to the acid low tension has reverse so it makes no difference how much air is passed through since we are measuring tensions.

Third, the reading for the low tension, that is, below 35 m. m. is very easy, and this is the only place that marks the danger zone. It is generally conceded that 30 to 35 m. m. demands treatment, 20 to 30 m. m. is nearing the border line of danger and demands strenuous treatment and below 20 m. m. indicates the early onset of coma unless some very strenuous remedies are resorted to. So you will see the knowledge supplied by this test is a guide to prognosis as well as diagnosis and certainly a valuable aid as a guide in the alkaline therapy.

Acidosis is due to one of the following:

1st. The formation of an excess of abnormal acids.

2nd. The failure of the kidneys to excrete the acids normally produced.

3rd. The excessive elimination of the bases from the body.

Diabetes is the disease in which we most frequently find acidosis and it falls under the first head. The acid, generally thought to come from fat combustion, is at first compensated by the loss of CO_2 and the excretion by the kidneys then when it accumulates above a certain point we have the "air hunger" that proceeds the coma.

In chronic Nephritis a mild acidosis is not at all infrequent and it is more of a tissue acidosis and it does not show a very great variation in the CO_2 tension and if it is probably due to a lessened kidney power.

In cardiac dyspnea there may or may not be acidosis. In most cases the dyspnea or hyperpnea is more due to insufficient oxygenation of the blood while in the cases of the class called cardio renal the same thing may be said that is said of nephritis.

One rather interesting type of acidosis and one that in many cases yields to vigorous alkaline treatment is the acidosis accompanying certain diarrhoeas not of the illocolitis type in infants probably due, as some think, to excessive alkaline elinmination or perhaps a lessing of the kidney activity. The tension of the CO_2 rapidly rises upon intravenous injection of bicarbonate of soda and in many cases remains up and the air hunger disappears. Certain cases have been reported where acidosis in children is due to autointoxication but much more work still remains to be done on this as well as other types.

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THE OTHER SIDE OF OUR WORK*

By E. Reid Russell, M. D., F. A. C. S., Asheville, N. C.

Fellow Members of the Section of Eye, Ear, Nose and Throat:

To follow in the footsteps of our first chairman, Dr. K. P. Battle, Jr., is an honor within itself and I thank you sincerely for electing me chairman of this Section. I wish now to direct your attention, not to diagnostic problems or operative technic, but to consider our own practical experience in the daily handling of the diseases curable by medical means alone.

As much credit is due us for preventing and minimizing the complications, as in our skill in handling the more serious complications that may and often do follow, unless timely treatment has been used. For instance, we have the persistent class of troubles caused by the lachrymal apparatus. I have carried out a line of procedure suggested by Dr. Risley of Philadelphia, for some time with more or less success. The object is not to slit the lachrymal canaliculus for the passage of the probes through the nasal duct to the floor of the nostril, or to use any violence or effort to force the probe, as this very thing, causes a traumatism that is more serious in its results than the trouble we wish to cure. As a simple temporary case of retention is by so doing changed into an incurable obstruction of the duct. Often the obstruction is in the nostril, a disease or anatomical deformity blocking the ower opening of the nasal duct near the floor of the nostril and back of the inferior turbinate.

In many cases the retention is only transient, due to a "cold" in the head, and frequent recurrence may bring about a permanent thickening and closure of the lumen of the duct.

Catarrhal conjunctivitis or blepharitis from eye-strain, may lead to closure of the puncta. In such cases after the use of 2 per cent. solution of cocain, we simply irrigate the sac and nasal duct with an alkaline solution, repeated in a day or two, if necessary. The neglect of such cases results in the mucopurlent or purulent dacryocystitis. A four per cent. solution of cocain is now used, followed by a 1 to 5000 solution of adrenalin, syringed into the sac and let this remain for ten minutes, and repeat, at the same time using this in the nostril. After the action of these drugs an alkaline solution is used through the duct; second, a one grain to the ounce of silver nitrate solution is used, and follow this with the same alkaline wash in a few minutes; or a very mild solution of tincture of iodine. Cold compresses and alkaline and astringent washes to the conjunctival sac are used at home in the acute cases. Should it still be impossible to irrigate the nasal duct, the lower canaliculus is slit, but not the common duct. A fine probe with a bulbous extremity is now passed and with great care attempts are made to pass it through the duct. Should this not answer, a No. 3 Bowman's Probe is tried, using no force. It may be well to wait a few days if not successful, continuing the home treatment. A permanent cure is often the result. Acute infection of the nose and naso-pharyngitis, a "cold" and "sore throat" cause about 90 per cent. of the cases of mastoditis, purulent sinuisitis, etc. Timely treatment will prevent these complications. It would be well for us to advise about cold baths and the fresh air sleeping, which is at times abused, especially in children susceptible to bronchitis and laryngitis, by having them sleep out of doors in bad weather. A preliminary treatment of most of our operative cases would make them easier and more sure of a prompt recovery, also lessening hemorrhage and shortening the convalescent period.

Hypertrophic rhinitis is another class of cases that should have both medical and surgical treatment; the mucous membrane cleansed and the chronic inflammation that produces it, cured. I find that camphor five grains, and menthol two or three grains in an ounce of liquid petrolatum is both antiseptic and a local anesthetic, and this is thoroughly applied to the mucous membrane, after nose is cleansed.

Chronic granular pharyngitis may be destroyed by surgical means, but the chronic inflammation that produces these granulations may be cured by using ten grains of zinc chloride to an ounce of glycerine, and a little C. P. hydrochloric acid will prevent the zinc precipitating out as oxychloric and making the solution inert.

Chronic inflammation may be prevented, such as laryngitis, tracheitis and bronchitis, if the patient is treated in the first stages of the "cold" by a good sweat, either by exercise, Turkish bath, or just an ordinary hot tub bath, hot drinks, not forgetting a big dose of castor oil to help in the eliminating process and restoring the normal circulation. An alkaline spray is used to open up and obstructed nose, followed by a powder made up of two

*Read before the recent meeting of the North Carolina Medical Society.

parts by weight of boric acid and one part of zinc sterate or fullers earth may be used instead.

If seen in the second stage of the disease and the serious discharge is troublesome, one grain of atropine to two ounces of liquid petrolatum is used. Acute catarrhal sinusitis that accompanies the acute rhinitis may be cured or prevented by the treatment of the primary disease. Here an application of cocain solution to the region of the nasal openings of the sinuses and mild suction and oil are alternately applied. In chronic purulent rhinitis, a local treatment can be given at home, of one dram each of boric acid and borax to one ounce of petrolatum. A small piece of this is placed in each nostril at bed time, followed by a bicarbonate of soda douche in the morning. In atrophic rhinitis the object is to increase the nutrition by stimulating the blood supply short of causing inflammation. Here ,thymal grains one, oil of eucalyptus drams one, in liquid petrolatum enough to make two ounces, is used after the nose is cleansed. This causes some redness of the mucous membrane, destroying the molds and bacteria that swarm in the secretions. Dr. J. A. Thompson of Cincinnati, recommended this in a paper some two or three years ago. The patient uses this for several months. The natural oil is used and not the synthetic.

Suppurative otitis media, both subacute and chronic, may often be cured by a well ordered treatment. I have used with more or less success, the following. I do not know where I picked this up. Hydrogen peroxide two ounces, alcohol one ounce, with the use of a cotton tipped applicator the ear is thoroughly cleansed with the solution, then dried. Now either the dry method or wet method may be used. If irrigation is resorted to, it should be done with great care. A Zzeroform gauze half inch wide is packed loosely against the perforation, in the tympanic membrane, not pressing it, and changed as often as it becomes moist; or boric acid will produce good results. The whole externa lauditory canal is filled with the boric acid, but this is only used where the perforation is large, or another treatment which proves effective may be used as follows:

Resorcin, drams one.
Formaline, minims twenty.
Alcohol, drams three.
AQ. dist. q. s. ad ounces sixteen.

A tampon saturated with the above solution is inserted well into the canal and changed at first, daily; later, at longer intervals.

For the repair of the tympanic membrane, I have procured the best results by using Trichloracetic acid or Okuneff's method. After the use of a 10 per cent. solution of cocain, applied to the perforation, then the edges touched with a very small cotton probe wet with the solution of trichloracetic acid, a white eschar forms. It is necessary that there is no cocain left about the perforation.

In external otitis and myringitis I have used for a long time a five per cent. phenol solution in glycerine. Later ichthymol, five per cent., was suggested, this is also introduced on a tampon into the canal for the relief of furunculosis of the canal or where there is an inflammation.

Would it not be a good idea to discuss more often "The other side of our work," the treatment, as religiously as we do pathology and the technic of our most interesting operations?

INDIGESTION.

By Matt Otey Burke, 204 East Franklin Street, Richmond, Va.

Judging from the perverted appetites of girls and young women, we might suppose that indigestion originated in the "Garden of Eden." No nation is free from it, and no climate offers immunity. Neither social nor political standing raises one above it—wealth seems rather to invite it.

It has no respect for age. We see it a few hours after birth and sometimes just before the old man retires to eternity. It seems to follow in the wake of civilization and flourishes in the fields of modern progress.

What is Indigestion? Indigestion is a consciousness on the part of the individual of having taken food into the alimentary canal. It varies from a mere fullness to a feeling of bursting distention; from a slight discomfort to an agonizing pain, and continues until the offedning portion passes beyond the irritated part, or is rendered inert naturally or artificially and until the offended nerve terminals have been soothed either by nature's methods or artificial remedies.

The Causes of indigestion can be considered under three groups: i. e., Dietetic, Alimentary and extra Alimentary. The second and third may be sub-divided into diseases and abnormal conditons.

Detetic Causes. Hurried eating usually means improper mastication. If the carbohydrates are not thoroughly masticated, the ptyalin has but slight effect, the unbroken pieces must be dissolved

by the fluids in the stomach or ground up by the gastric peristalsis and the digestion must be almost entirely performed by the pancreatic and intestinal juices. Meats and other proteids are digested largely by and in the stomach, if swallowed in large pieces the outer portion will be attacked by the gastric juices, the inner part cannot be reached until the outer part has been removed, and much of it will be passed on for further digestion in the intestinal canal.

If the individual immediately returns to work, the extra amount of blood necessary for digestion is required elsewhere, so the stomach and intestines must either work slowly or wait for more force. While waiting, the carbohydrates are fermenting, the proteids are changed into indigestible compounds, natural peristalsis is delayed and constipation encouraged. Large meals tend to distend the stomach and cause stasis or overtax the intestines and cause diarrhea. Rich soups taken with meals add too much bulk and if taken alone are too quickly consumed. Condiments often irritate causing pain in the stomach, too much HCl, and are usually constipating. Bad cooking is a prolific cause of indigestion. Many foods when properly prepared, are easy to digest, and are often irritating if not poisonous when improperly prepared. Improper combinations of foods cause trouble. Sometimes we find indigestion caused by too little food. Frequently we find the dyspeptic aggravating his trouble by eating the very thing that he thinks harmless; as tea and toast, when he has too much hydrocloric acid. Hurried eating, improper mastication, too much food, too little food, highly seasoned food and condiments, bad combinations, bad cooking, work immediately after meals, and sedentary living are all prolific causes of indigestion.

Alimentary Causes. Absence or loss of molars prevents thorough mastication and insalivation. Ulcers and sores in the mouth and throat interfere with mastication and produce bacteria that may infect the stomach and intestines. Gastritis produces an excess of mucous, decreases the production of enzymes and retards the evacuation of stomach contents. Later on the outlet may be narrowed, the muscalature weakened, hydrocloric acid increased or decreased and general gastric ectasy produced. Gastric ulcer may exist for some time without symptoms; usually there is pain soon after meals, especially if coarse indigestible or irritating foods are taken, or the pain may be delayed until the unbound acid comes in contact with the ulcer; the pain retards digestion and the undigested food irritates the ulcer, thus forming a vicious circle. There may be a continuous secretion of acid and the pain increased after the stomach is free from food. Chronic or healed ulcers may leave a narrowed pylorus or pockets in the stomach; then follows retention, fermentation and decomposition of food and ectasy.

Gastric Cancer produces inflammation and atony of the gastric mucosa, thus decreasing the gastric juices, depriving the system of proper nourishment ,at the same time producing toxins; both factors weakening the resisting powers and impoverishing the blood, further decreasing the gastric secretions. If situated at the pylorus complete obstruction may be produced. Hypersecretion, hyposecretion and atony, may be due to deranged conditions and not diseases. Hypersecretion alone frequently produces no symptom, if accompanied by atony it always causes indigestion by preventing carbohydrate digestion, favoring fermentation and irritating the gastric mucosa. Absence of hydrocloric acid throws extra work on the pancreas and intestines, so long as they are able to perform the proteid digestion no trouble arises but if they fail to digest the proteids, decomposition is likely to take place and cause diarrhea, or enough of the poisons may be absorbed to produce serious damage. Diseases of the pancreas cause a reduction or absence of the pancreatic juice; the fats are undigested, the proteids and carbohydrates that have passed beyond the stomach have onl ythe intestinal juices to depend upon which are not sufficient. The unabsorbable fats, decomposed proteids and fermented carbohydrates, cause distention, pain, increased peristalsis and diarrhea. Inflammation of the bile tract usually extends to the duodenum and by continuity interferes with gastric digestion or through the nervous system causes pylorospasm and hyperchlorhydria. An absence of bile in the intestines decreases peristalsis, increases the action of bacteria and stops the saponification of fats. Appendicitis seems to have a special grudge against the stomach producing, through the nervous system, pylorospasm, excess of hydrochloric acid and retention of stomach contents. It also interferes with intestinal digestion and is usually accompanied by constipation, though sometmes by darrhea.

Extra Alimentary Causes. The nervous system has a decided effect upon digestion; worry, anxiety and fatigue often

destroy the appetite, check gastric secretions and peristalsis, fright and sudden grief often cause a rapid passage of food through the alimentary canal. All acute illnesses accompanied by fever decrease or destroy the appetite, decrease the secretion of digestive fluids, retard normal gastric peristalsis and many times produce atony of the intestines.

Tuberculosis produces anaemia and lowers the general resistance of its victim. (Hildebrandt's investigations prove that fever is the controlling factor. When the fever is high the secretions are scant. When the temperature is low or absent, the secretions are normal). In the early stages of tuberculosis, the digestive symptoms are often the most conspicuous symptoms. In the last stages indigestion is nearly always present. Diseases of the kidney and liver effect digestion through the circulation, the nervous system and by the liberation of toxins.

Anaemia. All forms of anaemia, except chlorsis, decrease the gastro intestinal secretions and weaken the musculature, inviting or encouraging general ptosis. In chlorsis the hydrocloric acid is usually increased.

Diseases of the Heart. Some authors claim that gastro intestinal secretions are decreased in all diseases of the heart. When compensation is failing there is a venous hyperaemia and arterial ischaemia of the gastro intestinal tract. Indigestion is frequently the most distressing symptom in approaching decompensation. The gastric secretions are decreased, the muscles of the stomach and intestines are weakened and heavy meals cannot be digested.

Most cases of acute indigestion that end fatall yare due to diseases of the heart.

The individual may or may not be conscious of the fact that he has a diseased heart. He eats too much, the stomach is not able to digest the food nor to pass it on, fermentation distends the stomach and the stomach compresses the heart; or the food may pass through the stomach partially digested, through the small bowel into the colon and here the undigested proteids may decompose, loading the system with toxins, the carbohydrates ferment greatly distending the colon, which pushes up the diaphragm, and so impedes the heart, crippled by disease and still further weakened by poisons, that it can no longer perform its work, so the patient dies.

The Symptoms of Indigestion are a bad taste, heavyness, distention, belching gas, eructation of food unchanged, salty or very acid, a burning sensation in the chest or epigastrium, nausea, vomiting and pain in the stomach or intestines. Despondency, palpitation, drowsiness, temporal or frontal headaches. Intestinal unrest, pain, diarrhea and constipation.

Diagnosis. The diagnosis of indigestion is usually made by the patient. The physician must determine the cause as dietetic alimentary or extra alimentary.

Treatment. The treatment depends upon the cause and consists in removing the cause if possible and correcting the deranged condition of the secretions and the motor function.

INJURIES TO THE PANCREAS FOLLOWING OPERATIONS ON THE RIGHT KIDNEY.

By Hugh H. Young and J. A. C. Colston, from the James Buchanan Brady Urological Institute, Johns Hopkins Hospital, Baltimore, Md.

It is suggested that many cases of severe post-operative distention may be due to injury to the pancreas during kidney operations. Such injury may occur, as is shown by the autopsy on one case described, and is a most serious accident. The pancreas extends around the duodenum to the rear at the point where it is nearest the kidney, and at this point the structures are fixed so that they cannot recede in case of trauma. In the case mentioned, an aberrant artery to the pole of the kidney made necessary the use of clamps in the depths of the wound, the pancreatic tissue being crushed. The authors advised greatest care to avoid this event.

The Verumontanum, With Special Reference to the Sinus Pocularis: Its Anaromy, Histology and Physiology.

By A. G. Rytina, from the James Buchanan Brady Urological Institute, Johns Hopkins Hospital, Baltimore, Md.

Rytina studies carefully serial sections of the verumontanum and its immediate neighborhood. He finds that the verumontanum is an elevation formed by the upward projection of the sinus pocularis covered by the mucous membrane of the posterior urethra. The verumontanum is made up almost entirely of the sinus pocularis together with the ejaculatory ducts and occasionally a few prostatic ducts. It is not a cavernous structure, indeed the blood supply is not any greater than the surrounding tissue, and there-

fore its function cannot be of an erectile kind. The ejaculatory ducts may open into the sinus pocularis, as this occurred in one of Rytinas cases. The author agrees with Walker as to the physiology of the verumontanum and sinus pocularis, viz., that the veru serves to elevate the ejaculatory ducts to a central position in the urethra, where the spermatozoa are quickly mixed with the numerous jets of prostatic secretion, and that the sinus provides a secretion helping to make up the semen—but adds that complete excision of both structures does not interfere with normal sexual function.

Bacterial Vaccines the Therapeutic Weapon in the Daily Combat of Infections.

In the treatment of infections, the goal should be the permanent cure of the disease. This is therapetically accomplished by creating in the patient ferments, which neutralize and destroy the bacterial ferments and germs responsible for the disease. A vast amount of clinical experience has abundantly proven that germ invasion is overcome by raising body resistance, with the timely use of bacterial vaccines.

The great advances in treating acute general infections with bacterial vaccines during the last few years are due to the fact that physicians are more cosistent in their clinical judgment, which is due to the constantly increasing encouragement from the undeniable clinical results they have obtained with Sherman's bacterial vaccines at the bedside.

In dealing with diseased conditions it is essential that our measures conform as nearly as possible to natures methods. The close association of certain infecting organisms with diseased conditions, would at least indicate that they constitute essential factors towards interfering with our well being and that stimulating cell activities to increased vitality, by the use of bacterial vaccines is one of the important means of defense. Vaccines which contain the most common infecting organisms serve this purpose best. A combined vaccine containing colon bacilli, streptococci, pneumococci and staphylococci is the one usually employed. Bacterial vaccines consist essentially of bacterial proteins and are given in such extremely small doses that no harmful results can follow their administration.

Sherman's standard suspension vaccines are therapeutic weapons, and when used in combatting acute general and chronic infections, they give gratifying results.

For full particulars write G. H. Sherman, M. D., Deroit, Mich.

America's Ampoule Headquarters.

"I am glad that you carry Lilly Ampoules," said a physician to a retail druggist recently. "I always feel confident that if results are to be had from a preparation, I'll be certain of them if the product bears a Lilly label. That's why I prefer Lilly Ampoules."

The use of the ampoule is growing rapidly. The accuracy of dosage, directness of medication an dconvenience which ampoules afford appeal to the practitioner.

Eli Lilly & Company is said to manufacture the most complete line of ampoules made in this country. This well-known house already has built up a reputation on ampoules that has won for it the sobriquet "The Ampoule House."

Lilly Ampoules are supplied individually wrapped and labeled in boxes of one-half and one dozen, also in substantial cloth-covered slide cases containing an assortment of ampoules in popular demand. They are supplied through the drug trade.

In Neuritis, is the Hot Water Bottle the Best Anodyne? Palliation, by means of externally applied heat, is just as popular today as it was in Hippocrates' time.

The hot bath and the hot-water bottle are wonderful comforters. But who can be continuously in the bathtub, or who can be forever carrying a hot-water bottle? And how all too soon does the most faithful hot-water bottle lose its ardor and its temperature!

There is no simple adjunct in this category more simple and more genuinely effective than application by the patient himself, if possible along the course of the affected nerve, with K-Y ANALGESIC (mehtyl-salicylate, camphor and menthol, combined in a non-greasy, water-soluble base).

K-Y ANALGESIC has the obvious advantage over the hot-water bottle in that "it stays put" for a much greater period of time. Nor is there the possible danger of a hot-water bottle burn—a factor especially to be thought of where the neuritis patient is weak and infirm.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page ——this issue).

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

THE SILENT DISEASES.

Attention was recently called in an address in Philadelphia to the extreme gravity of silent infections—cases of disease which were extraordinarily insidious in onset and the gravest character. To this class do we include the hopeless paretic, the gravely hit tubercular sufferer and the poor devil writhing in the last throes of lock-jaw.

A young man is indiscreet in his youth, a chancre develops, he receives a little treatment and the trouble apparently quite disappears. Ten, twenty, thirty, forty, aye fifty years elapse. Changes in disposition occur along with other disabilities. Things go from bad to worse. The closing scene is enacted in a state institution for the insane. Had treatment been adequate or had a Wassermann been done a useful life may have gone on to an uneventful death. Arrant carelessness has however burdened the tax-payer while the burden on the afflicted has been far greater, in the the sense of lost mind and lost estate.

A young mother strikes her breat in her daily routine. She suffers sharply for a spell but the bruised area soon heals. The passing of time brings to light a small lump but her confidante next door informs her of a like experience and of the great utility, moreover, of a certain application or salve of wonderful virtues. The lump for some reason refuses to go away; it gets a little bigger in fact. She finally decides to see a doctor. He at once sees the hopelessness of the case. Another silent disease has scored "a hit."

A worker in a machine shop gauges his hand. The first-aid kit is requisitioned and the track of the offending tool is "fixed" with a little pure carbolic acid followed by a douching of alcohol. He will be all right in a few days. Two weeks have passed. The accident is forgotten but what can this stiffness and twitching of the hand mean? It means another bull's eye for another silent worker.

Thus it may seem quite within the physician's province not only to occasionally plan means to educate a thoughtless and ignorant public but to exercise the needful measures himself when offering treatment.

FIBROBA MOLLUSCUM.

Of all the queer diseases, either internal or external, which may afflict the human body fibroma molluscum appears to about "take the cake." Beginning in early adult life it is characterized by numerous small nodular growths of fibrous tissue situated just beneath the skin and distributed over nearly the whole person. Curiously enough the face and scalp are less often encroached upon while the palms of the hands and the soles of the feet are said never to be attacked. The subjects are generally below medium stature, rather frail and delicate constitution and die at an early age of some intercurrent sickness, it often being pneumonia. It has been met with in men more often than in women and is not confined to any particular race or climate, the negro being perhaps full more liable to it than the Caucasian. The American Indian, however, seems to be immune.

The etiology of the disease is one of the hidden mysteries of medicine. Just why fibrous tissue should grow and cells multiply in one case into a single large tumor while in another the grouping of cells is scattered in many small collections of nearly uniform size, each one separate and distinct from the others, is a conundrum that has never yet been explained. Yet other conundrums seem to harass us as well and their solution may be immaterial only as it satisfies our inborn curiosity. Obviously there is no treatment except their removal by some form of surgical procedure; and this is usually impracticable on account of their number and the constant appearance of new ones as long as the patient continues to live.

A number of years ago the writer had a case in his hospital practice which he reported in the American Medico-Surgical Bulletin. This man had attained the unusual age of seventy-seven, was 5 feet 2 inches in height and weighed 130 pounds. He had always had rather poor health, although he stated he had followed the occupations of a farmer and a woodsman. He was literally covered with tumors from the top of his head to his feet, on some portions of his body there being as many as half a dozen or more to the square inch. They were fewest on his scalp and face, the palmer and planter surfaces of his hands and feet being free. With the exception of three or four there were none arger than a marble and only one, on the inside surface of his thigh, as large as a walnut. One interesting fact he mentioned was that a sis-

ter had a large uterine fibroid and eventually died from hemorrhage from it; but there is room for belief that it was in reality malignant.

By good fortune fibroma molluscum is comparatively rare, has no tendency toward degeneration and shows no direct or distinct mortality. C. K.

AUTO-INTOXICATION.

There are herbivorous animals, and carnivorous animals; but man is herbivorous, carnivorous and omnivorous! The lower animals select food suitable to their nature and needs; and by an unerring instinct, partake only enough to satisfy their hunger. Man may kill himself by gluttony; by indulging in rich, highly sophisticated viands, and that at unseasonable hours. Is it any wonder we hear of so many sudden deaths from acute indigestion? What is it but auto-intoxication from fermentation, and by reflex action through the neumagastric nerves, which supply the stomach, heart, and lungs, paralyzes the cardiac nerves, causing sudden death. Gluttonous indulgence poisons the system by the formation of ptomaines.

Man is not only the receptical of poisons, but the human body is the laboratory of poisons. Normally, and physiologically, poisons are present in the human system constantly. These poisons are eliminated through the skin, lungs, kidneys, liver, and the intestinal canal. Only when these secretions, and excretions, are actively performing their functions, can good health be enjoyed. Ill health, and many grave diseases cannot be escaped from if elimination is not perfectly active. There is another fact to bring to your notice; and that is what is termed "invisible transpiration." Sitting in a place where a current of damp, or cold air, is allowed to blow on any part of the body; especially when the body is not in motion, gives a cold to certain exposed parts, by checking this "invisible transpiration." Such transpiration is the throwing off of animal heat, or caloric, from the body, through the countless pores. The body throws off heat; and clothing keeps us warm, by preventing the evaporation of heat.

It has been said, that man is constantly making an effort to commit suicide; i. e., within his organism is carried on those processes which must inevitably, and ultimately, result in disease, and death, unless nature is provided various means, and special organs for neutralizing and carrying off formed toxic substances.

Constant demands are made upon the resources of nature, to provide material and enable the cellular elements to maintain their relative number and quality; this is assimilation. On the other hand, activity necessarily results in the tearing down and casting out of those elements which have served their purpose. The blood being a common carrier, receives into its current, these wastes and non-poisonous materials, of which it must be freed if the machinery of life is to run smoothly on.

The brain and nervous system control and operate every organ, every function of the human body, in health, asleep or awake. The nervous system has a food element exactly the same as has muscle, bone, and blood. This food element is selected from the food we eat; if an excess is taken, the individual is ill. The man who spends hours at his desk is tired; more tired than the man who works eight to ten hours in the field. The sedentary brain worker rises as tired as when he went to bed. The out-door man rises early, refreshed. One eliminates poisons, and the other accumulates them, causing toxemia. With proper living, activity, and indulging in simple food, insures that great desideratum, **perfect health**! Shakespere says: "What a piece of work is man! How noble in reason! How infinite in faculties? In form, and movement, how express, and admirable? In action, how like an angel? In apprehension, how like a god? The beauty of the world, and the paragon of animals?" When these traits are become true, it can then be said, in the language of the Psalmist: "No plague shall come nigh thy dwelling; but with **long life** will I satisfy thee."

The prolongation of physical life is, in itself, a very simple and easy matter. Given a reasonably healthy body, and a fair heredity, it is entirely probable that any person may attain to a ripe old age! But he must submit himself to discipline to what is called the "simple life." The discipline involves abstinence from all those excesses in eating, in physical and mental strain, etc.; by so living, and seeing that the bodily functions are performing their part in eradicating physiological poisons, will result in putting the doctors out of business!

The putrefactive and fermentative condition of the alimentary tract, gives rise to ptomaines and leucomaines, as well as another poisonous agent known as indican. The latter agent couses poison which is characterized by malaise, headaches, and general ill health. The viscidity and decomposition of bile, the effect

of torpidity of the liver, is poisonous, causing biliousness, jaundice, and nausea. The liver must be actively secreting and excreting normal bile into the duodenum, or intestinal indigestion will result. If the bile is very viscid, and doesn't flow freely, there is an element called choltesterin in the bile, which agglutinates, forming gallstones, which accumulate in the gall bladder, producing stones in it. If the kidneys fail to eliminate urea, phosphates, chlorides, and other waste from the blood, uramic poison supervenes, which is a grave danger.

F.

THE DOCTOR.

A doctor may very easily make a fair reputation, and a good deal of money, without much knowledge of medicine, for the reason that medicine is a closed book to the vulgar!

When a man dies, none of his friends (unless there be an inquest) knows, in the least, what killed him! If some big medical gun is called in, he will say the case has been very judiciously treated.

When a sick man gets well, no one knows what cured him; and the doctor—who was, perhaps, on the wrong track throughout—gets all the credit. Of his science (?) as a doctor, they are not able to judge; but if he is informed on every other subject, his patients will swear by him. Ignorant montebanks flourish, and get the money; while knowledge, and skill, are modest, but honest!

F.

MARTIN KALLIKAK.

Talk about young men that get "in bad," what do you think of the story of Martin Kallikak? This young man, we are told, about the year 1770 met and married a feeble-minded girl. Martin himself was normal mentally and physically and of good family. A son was born to them and he was feeble-minded. But he procreated well, as they generally do, and there are 480 traceable descendants of that feeble-minded girl. They are accounted for in this manner:

46 normal.
36 illegitimate.
14 immoral.
27 drunkards.
143 feeble-minded.
82 died in infancy.
All others unknown.

Now we are told Martin married a normal girl of good family after his early escapade and their traceable offspring and descendants numbered 496. Out of this number 493 were normal individuals. The men with few exceptions were intelligent, industrious and upright, while the women were refined and cultured.

Feeble-minded parents produce paupers, criminals ,prostitutes, and drunkards. Those who are dangerous, morally, physically and mentally—in other words subnormal and unfit—should by law be denied the privilege of procreating and thus perpetuating a vicious strain. This is altruism and common sense.

THE HIGH COST OF DRUGS.

Most drugs of real value have doubled, trebled or quadrupled in prices. It makes hard lines for dispensing doctors. Doctors who dispense do not like to be accused of employing "cheap" drugs. The "cheap" doctor is never popular. Physicians like the reputation of employing good remedies and instruments and eschewing those that are cheap and unreliable. In fact many go to the extreme of prescribing or employing whatever costs the most whether or not it has greater value than something less expensive.

It behooves the prescribing doctor these days to practice a reasonable economy. The majority of doctors little more than make a respectable living. They can not afford to deal out expensive drugs and supplies with a lavish hand if the fees are not commensurate with the cost. As it is the fashion these days to economize—one that is commendable if practiced along conservative and sane lines—it is well for the doctor to get the habit. It is well not to prescribe or dispense more medicine than is needed; it works a hardship to patient or physician. When a tablet of codein is worth a nickel it does not take many cases requiring anodyne treatment to cripple the doctor's pocketbook in a manner quite noticeable. Digestive ferments are always high if the products have much real value. It is not often that a digestive ferment is really indicated anyway. We have a few costly remedies that we can not well get along without. Perhaps quinine might be mentioned in that class of drugs, although this is a remedy that has a few pointed indications and shoud not be employed in a hit-or-miss manner as it is so frequently. Cocaine, adrenalin, pituitrin and a number of other drugs are very high in price but their therapeutic action is so positive and only a limited quantity required so that no physician can afford to be without agents of this class in his armamentarium.

And if the doctor writes prescriptions instead of dispensing he should "have a heart" for people who find it difficult to

live in these days when the high cost of everything prevails. We have read of a family whose druggist bill alone in a case of typhoid fever amounted to over eighty dollars. The doctor thought he must write a new prescription for a different remedy every day in order to impress the family with the fact that he was "doing something." The writer will hazard the statement that the drug bill in an average case of typhoid fever should not exceed five dollars. After all, what would there be in the drug store that would help the patient except a little calomel, salines, castor oil, sulphocarbolates, and perhaps a few other very common drugs?

W. T. M.

WOMEN AND GENIUS.

A distinguished psychologist contributes to a recent issue of a college magazine a lengthy article to prove that women do not make the greatest musical composers because they are not mentally or emotionally fitted for the task. Incidentally he holds that they can not reach the highest grades in other lines of artistic endeavor for the same reason. Hence they are not among the greatest architects, painters or poets.

To prove his thesis he selects the names of those who have become great in certain lines of art, especially in the line of musical composers and finds that in the front ranks of the great in this realm of art the names of women do not appear. True, there are examples of distinguished composers and painters who are of the feminine order but they do not reach the highest rank.

Therefore, the psychologist reasons that because they have not attained to the highest rank it is because they can not, and they can not because by nature they are not endowed with the peculiar gifts which would enable them to arrive at such a rank.

Is this logic to be accepted? Is it true that by nature woman is not endowed with the grade or the kind of genius that would enable her to attain to any possible rank in any of the departments of art?

Perhaps our psychologist has arrived at the solution of his problem by leaving out of or by giving undue value to some of its elements. A large question such as is the problem of the comparative powers of genius or of imagination as found in the two sexes can not be solved by dividing the number of the greatest artists in any field of endeavor by two and asking what proportion of each division is to be placed in the masculine and what in the feminine class.

The problem is infinitely more complicated than this, depending upon the concurrence of a great variety of circumstances. Among these we may consider opportunity, necessity, interruptions and a great variety of favorable and unfavorable contingents.

Human effort is the result of human necessity. Great composers, great orators and great painters are the expressions of the needs and the opportunities of the exemplars of these forms of greatness. It is true that under the most favoring circumstances, not every person, male or female, could make a great artist ,nor could the highest culture in music or in painting produce from the majority of either sex a Beethoven or a Michelangelo.

The artist in music or in painting is born, not made, therefore, the great artist is an exceptional person. From an exceptional few must be developed the smaller numbers who can occupy places in the first rank.

Since time out of mind the social life of the human race has been such that the stimulus to the production of great works of art has been, not altogether confined to but greatly restricted to a single sex. It has been the man who by necessity has been forced to do the greatest amount of artistic work. When we select from all the people the men and women who by nature are fitted for the production of great works the number is comparatively small and when again we select from this number the men and the women who are, by the circumstances of ordinary life forced to do their best work in one direction and who are not interrupted in the exercise of their efforts, the number of women is enormously reduced. When again the force of social custom is brought into the problem the already reduced number is again divided by a great divisor.

When such reductions are made and when we take the probabilities within the greatly unequal remainders, the chances that any number of the small remainder on the feminine side will reach the front rank is greatly reduced.

These are, of course, only a few of the considerations which must be taken into account when we would inquire whether the male or the female of the human species has any monopoly of genius in art, literature or science.

G. T. S.

EDITORIAL NEWS ITEMS

Dr. John Gibbon, Philadelphia, formerly of Charlotte, N. C., has sailed for France with the Jefferson Medical College unit.

Dr. Thomas Williamson, Norfolk, Va., has recently organized a hospital unit of 100 men for service on the Western front and expects to shortly sail for the seat of war activities.

Dr. Wm. L. McGrath, the highest honor man of the class of 1917 at the Medical College of South Carolina, has entered the U. S. Naval Hospital at Newport, R. I., as resident.

Dr. Roy K. Flanniga, Assistant Health Commissioner of Virginia, has resigned to engage as City Health Officer of Richmond, Va., Vice Dr. E. C. Levy resigned to accept similar service in New York.

Dr. A. F. Toole, Asheville, N. C., announces his opening an office exclusively for the treatment of Urology and Syphilis with laboratory facilities for the Wasserman Test.

Dr. Robert Crawford, Rock Hill, S. C., recently returned from the French war front, is active in the organization of Red Cross Corps in South Carolina having last month effected an organization at Fort Mill, S. C.

The Lancet-Clinic, of Cincinnati, we regret to learn, stopped publication at the end of the year. It was one of the oldest medical journals in this country, having been established in 1841 and was one of the few medical weeklies.

Dr. W. P. Herbert, Asheville, N. C., recently enrolled in the Officers' Reserve Corps, U. S. A., and called to the colors in June, has cabled Asheville friends of his safe arrival with the American troops in France.

Governor Stuart of Richmond, Va., on May 13th appointed Dr. J. H. Ayers of Accomac to the State Board of Medical Examiners, to succeed Dr. J. H. Barney of Fredericksburg who has recently resigned. The appointment is until April 1st, 1918.

In Norfolk, Va., a great many physicians and surgeons stand ready to do their part in whatever way and whenever they might make their services the most valuable. These were the sentiments expressed at a meeting held in Norfolk recently at the regular monthly meeting of the Norfolk Medical Society.

Dr. Wm. DeB. MacNider, Professor of Pharmacology in the University of North Carolina, delivered an instructive address before the New Hanover County Medical Society recently on the Etiology of Certain Types of Nephritis, a subject to which Dr. MacNider has devoted much original experimental research work in the University laboratory and at the University of Chicago also.

The Medical College of South Carolina, after due consideration, and on advice of the Surgeon General's office at Washington, D. C., has decided not to offer a continuance of the regular courses of medical instruction during the summer months as was suggested some time since with a view to shortening the time necessary for completing the medical course on account of the war demands.

The Rockefeller Foundation has stated that they will appropriate $875,000 for the purpose of aiding the war or to be spent for war purposes in Europe. Of this $475,000 will be spent in America for medical research and humanitarian aid, and the remaining $400,000 will go to continue relief activities now being carried on abroad.

At Spartanburg, S. C., on June 28th, the regular monthly meeting of the Spartanburg Medical Society was held at 12 o'clock in the Chamber of Commerce rooms. This was a clinical meeting, and several interesting cases was exhibited and discussed. They also discussed war problems and the medical and surgical service.

Dr. Seale Harris, Birmingham, Ala., the brilliant editor of the Southern Medical Journal, while attending the recent sessions of the A. M. A. in New York was stricken with appendicitis and removed to a hospital for operation, which was successfully performed. After a few weeks convalescencing in northern New York he has returned to Birmingham resuming the responsibilities of the Journal, the S. M. A., and his large practice.

The recent election of Dr. Charles Minor, Asheville, N. C., one of the well known phthisologists of the famous

mountain section of Western Carolina to the presidency of the National Association for the Prevention of Tuberculosis at the Cincinnati meeting in May on his fifty-second birthday was a gracious tribute to a kindly gentleman and a scientific physician worthy of all honor his profession may bestow.

Dr. J. M. Whitfield, city chemist of Richmond, Va., a grand son of the late Governor Morehead of North Carolina, has recently been appointed as city coroner of Richmond, Va., to succeed the late Dr. Wm. H. Taylor who filled the office for twenty-five years.

The Augusta County Medical Society of Virginia on the 16th of May at a meeting arranged to care for the practises of physicians called to the front, during their absence. At that meeting a report of the committee that had been appointed a month previous was read and resolutions were passed providing that needs of the government will be cared for by the society, and also that the doctors who care for the families of the absent physicians ,turn over to the families of the absent physician a certain percentage of the fees collected.

Drs. R. L. Payne and R. L. Payne, Jr., for a number of years past of Norfolk, Va., but originally of Lexington, N. C., where the former rose to eminence among Carolina medical men (as did his estimable father, also Dr. R. L. Payne) announce their retirement from general practice in Norfolk, Va., and intention to give their entire time to surgical practice and consultation. Carolina physicians duly appreciative of their many personal and professional excellence will wish success abundant in their more restricted field of professional endeavor.

Dr. R. W. Browne, Assistant Surgeon of the United States Public Health Service, of Norfolk, Va., left that city June 25th, for Ft. Snellings, Minn., where he will join the regular army as captain of the medical Corps to prepare for service in France.

Dr. Browne has been stationed at Norfolk, Va., for two years, going there from the Philippines, where he served in the medical corps of the regular army for a year with the rank of Lieutenant.

Dr. Browne is a first-class medical gentleman, and will do his best wherever he goes, to perform intelligently and faithfully his duties.

The Chiropractors of North Carolina recently met and organized their State Board of Examiners. Just what the ultimate outcome of this licensing of the cult will be it is not wholly clear. Those advocating the establishing of a single State Examining Board for all practitioners of the healing art, apparently lose sight of the fact that after becoming legally recognized and having its licensing power in the state placed in the hands of its own members, each of the medical cults immediately proceed to raise the standards of requirement, and ultimately those licensed are educated men. Again sooner or later a new cult appears, and history repeats itself in the initial low standards, professional opposition, licensing, and eventual elevation of standards. After all it is a question whether all of the votaries of human healing will ever become at one time, educated members of any kind of a medical profession, and it is very possible the men who founded the present system of medical examination and licensure in North Carolina, were probably as near attaining an ideal system, being as it is, strictly under regular medical control in so far as regular medical practitioners are concerned, and subject practically, only to such regulations as the professional sentiment and judgment of the State Medical Society may dictate. The regular medical profession of North Carolina, despite the fact the legislature may from time to time provide for the licensing of medical cults, will naturally go slowly in giving up its time-honored power to absolutely and wholly regulate the examining and licensing of all members of the regular medical profession in the state. It is a prerogative exercised by few or no other states to the degree exercised in this state, and the profession will seriously consider any propositions looking to handing back to the state the powers it has enjoyed since 1859. J. H. W.

War Department Urges Examination of Medical Men.—The State Committee on National Defence, Medical Section, has orders from the War Department at Washington to examine at once all dentists, veterinary surgeons and colored physicians who have made applications, that they may at once receive their commissions. For this purpose a Board of Examiners has been appointed, who in turn has appointed special examiners for the convenience of the men who have made applications. The names and addresses of the examiners are as follows:

Drs. H. A. Royster and A. W. Knox,

Raleigh, N. C.; C. O. Laughinghouse, Greenville; B. K. Hays, Oxford; M. H. Biggs, Rutherfordton; D. T. Tayloe and J. C. Rodman, Washington; R. L. Gibbon and G. W. Pressley, Charlotte; M. H. Fletcher and E. B. Glenn, Asheville; J. E. Stokes and C. M. VanPoole, Salisbury; J. M. Parrott, Kinston; J. F. Highsmith, Fayetteville; E. J. Wood and J. W. Tankersley, Wilmington; H. F. Long, Statesville; S. H. Lyle, Franklin; J. W. Long, Greensboro; I. M. Taylor, Morganton; D. A. Garrison, Gastonia; M. S. Martin, Mt. Airy; F. M. Hanes and E. A. Lockett, Winston-Salem; Foy Roberson, Durham; L. H. Webb, Chapel Hill; L. B. McBrayer, Sanatorium; J. Howell Way, Waynesville; F. R. Harris, Henderson; E. T. Dickinson and M. Saliba; Wilson, T. S. McMullan, Hertford.

Physicians, dentists and veterinarians desiring to make applications for commissions are requested to apply to their nearest examiner who will take their applications, examine them and forward their papers to Major J. W. Long, chairman, Greensboro, who will endorse the papers and forward the same to Washington; While physicians, dentists and veterinarians under the age of 55 are eligible for commission, it is the young, active, seasoned men of mature judgment that the Government needs most at this time.

"The Clique"—A wise and working Carolina doctor of medicine recently sent the editor the subjoined lines with the comment "Don't you think these lines ought to be pasted in the hats of some medical brethren who attend the meetings to talk about "The Ring?"

"The Clique."

"What is "The Clique?" 'Tis a body of men
Who attend every meeting, not just now and then;
Who don't miss a meeting unless they are sick—
These are the men the grouch calls "The Clique."

Who don't make a farce of that sacred word "brother,"
Who believe in the motto to "help one another;"
Who never resort to a dishonest trick—
These are the men some men call "The Clique."

We all should be proud of members like these—
They can call them "The Clique" or whatever they please
They are the fellows—as we say—who "stick,"
The very same men—a boob calls—"The Clique."

Mobilizing Doctors—A Corps of 10,000 Could Care for 1,500,000 Men.—Of the United States army the first organization to be sent abroad was the medical corps, of which several units are now at hospitals in France and others are ready for immediate duty there. As troops are transported to France and the draft progresses, the number of trained medical men required by the government will rapidly run into the thousands. At least seven doctors will be needed for every 1,000 men in active service.

How thorough have been the preparations for the work to be done was told by Dr. Rupert Blue, surgeon general of the United States public health service, at the convention of the American Medical association. Through that body within the last two months the names and residences of 142,000 physicians and surgeons, and information concerning them, have been collected and turned over to the government, with the assurance that a full quota ot volunteers will be available. A corps of 10,000 could care for an army of 1,500,000 men.

In Great Britain the demand for medical men for the army has been so heavy that many sections of the country have seriously felt their absence. In that respect the United States is far better equipped than any of the allies at the beginning of the war. In numerical strength the medical profession here is exceptionally strong, and in training and experience it ranks high. Its readiness to enlist for patriotic duty should serve as a further appeal in behalf of the Red Cross in its efforts to raise a $100,000,000 fund.

North Carolina State Committee on National Defense Recommends Slective Draft for Medical Men.—At a meeting of the physicians composing the North Carolina Defense Committee held in Raleigh, June 13, the following resolutions were adopted:

Whereas, the justice, wisdom, and effectiveness of the selective draft have been recognized by Congress in raising a strong army from our civilian population, and

Whereas, the advantages of the selective draft apply with equal force to securing adequate medical service for the army: therefore,

Be it Resolved, that we, the North Car-

olina State Committee on National Defense, Medical Section, recommend to the General Medical Board of the Council of National Defense that the said Board use its influence with Congress in having the principles of the selective draft adopted for securing an adequate medical service for the army.

In adopting the above resolutions which were immediately given to the press the committee were not influenced by the fact that North Carolina was very far below her quota in volunteering medical men, (as a matter of fact she is in advance on June 23 of any Southern state), but because the country at large was far below the 17,000 medical officers advised by Surgeon General W. C. Gorgas as being necessary for the proper caring for the new National Army.

The selective draft would ensure a proper medical service for the nation's pressing needs, and also relieve individual physicians from the responsibility of decision. Prior to the April session of the North Carolina State Medical Society only about a score of North Carolina medical men had enlisted in the Medical Reserve Officers' Corps of the U. S. Army, but the activities displayed at the Asheville meeting of the society by the friends of enlistment, resulted in many accessions to the list, and since then the enlisting has gone on until now possibly nearly three hundred have signified a willingness to serve the Nation. How proud we would all feel if the enrolling could be speeded up until our State's quota could be filled without conscription. But when citizens do not manifest a disposition to perform their functions as such, there is most often a way to be found to impress them with the futility of neglect, and the selective draft is in every sense just as applicable to medical gentlemen as to any other class of our citizens, especially if by deliberate failure to respond to their country's call it is made manifest the instrumentalities used upon the masses must also be applied to them.

While possibly grating to our more sensitive professional nerves, we should readily and agreeably accept the selective draft principle as the correct one under the circumstances and be ready and willing to do our full duty. Examining the list of Carolina physicians enrolled in the Officers' Reserve Corps, U. S. A., it is interesting to note that the doctors of middle age and over have shown far more readiness to enlist than have the men of the younger ages, the earlier enlistments being almost with scarce exception confined to men over forty. This is probably not at all due to a lack of patriotic impulse on the part of the younger medical men, but is more likely chargeable to the fact that the younger men have had their time so filled with the study of things more purely professional that, like the large majority of the American people to date, they have scarcely risen to a complete conception of the gravity of conditions confronting the Nation, hence have failed to be so profoundly impressed with the consciousness of an existing imperative necessity that every truly good citizen should arise and offer his best for the service of his country.

The more mature men of our profession, with wider experience in the affairs of the world, with broadened sympathies in the things that concern the welfare of its people, have naturally earlier appreciated the more serious aspects of the national peril and need. However, the Carolina doctors are going to do their full duty in the premises before the contest for human liberties is ended, equalling, if not surpassing every other individual class of our citizens in their devotion to the Republic and the holy purpose of humanity's rights to live in peace and be free men. J. H. W.

License to Practice Medicine Granted Young Medical Men in North Carolina.—Sixty-five successful applicants for license to practice medicine in this state were announced July 8 by Dr. H. A. Royster, for the state board of examiners, also twenty-one were licensed through reciprocity and one, Monroe J. May, of Lovett, Fla., was granted a limited license. In examinations the highest average was by J. R. Latham, of Belhaven, who made ninety-three, and the next was ninety-two, by F. C. Hodges, of Greenville. The full list follows:

Claudius McGowan, Greenville; Zeora K. Justice, Davidson; George C. Singletary, Clarkton; Harry L. Brockman, Greensboro; Joseph R. Latham, Belhaven; Dewitt R. Austin, Charlotte; Chas. A. Hensley, Burnsville; Elijah B. Whitehurst, Beaufort; Leonidas L. Jones, Kenansville; Carl M. Vanpoole, Jr., Salisbury; Avery B. Graybeal, Clifton; Joel H. Pittman, Battleboro; John W. Holt, Asheville; David T. Long, Hurdle Mills; Lloyd L. Whitley, Crawford, Ga.; Cola Castello, Aulander; Vance P. Peery, Kinston; John C. Sossomon, Midland; Lester E. Hockett, Pleasant Garden; William C. Thomas, Raeford; Thomas L. Carter, Hobbville; Jasper D. Hemingway, Linden; Junius R. Vann, Jr., Fay-

etteville; James M. Keaton, Washington, D. C.; Willard M. Lane, Washington, D. C.; Foster F. Burnett, Wilmington; Levi A. Gibson, China Grove; Owen B. Williams, Fayetteville; Warren C. Melehore, Fayetteville; Harry E. Brooks, Sunbury; John W. Gainey, Parkton; Wester G. Suiter, Garysburg; John L. Rawles, Gatesville; Douglass H. Nesbit, Charlotte; Albert H. Hayes, Marietta; Hugh C. Wolfe, Greensboro; Menory F. Boyle, Henry; Harry H. Barrett, Charlotte; Rack F. Benthall, Ahoskie; Thomas A. Smith, Midland; Austin F. Klutzz, Maiden; Guy H. Sumrell, South Boston, Va.; Goldman M. Young, Farmer, Tenn.; Mary Jannett Alexander, Huntersville; William C. Williams, Apex; Benjamin T. Atkins, Gold Hill; Arthur E. Guage, Forbes; Bullard, Stedman; Walter P. Smith, Midland F. Crouse, Crouse; James R. Parker, Fairbluff; Neill G. Nicholson, Jr., Powellton; Charles L. Outland, Woodland; Percy B. Stokes, Ruffin; Frank C. Hodges, Greenville; Mercer C. Parrott, Kinston; Mathew L. McCorkle, Newton; Harry C. Thigpen, Tarboro; Russell M. Cox, Washington, Clifton F. West, Dover; Thomas Craven, Charlotte; Mark A. Griffin, Wingate; Margaret C. McNairy, Lenoir.

Those licensed by reciprocity are:

C. R. Andrews, Asheville; G. A. Aiken, Wake Forest; Yates M. Barber, Winton; E. M. Bell, Greenville, Tenn.; William A. Bishop, Aleca, Tenn.; W. A. Black, West Asheville; Herbert H. Brown, Asheville; J. C. Bradley, City Point, Va.; H. E. Chauvin, Brentwood, N. Y.; G. W. Cocke, Mooresville; I. S. Cunningham, Winston-Salem; J. O. Fitzgerald, Pelham; U. G. Jones, West Jefferson; Catherine M. Munro, York, S. C.; J. A. P. Shields, Crestmont; William T. Shipp, Newton; L. Jack Smith, Burlington; A. F. Toole, Asheville; L. D. Walker, High Point; C. E. Wooding, Winston-Salem; Charles E. Young, Greensboro.

American Medical Editors' Association.—This Association held its forty-ninth annual meeting at the Hotel McAlpin, New York City, June 4 and 5. Owing to the absence of the president, Dr. George M. Piersol of Philadelphia, due to his having been called to military duty at Fort Oglethorpe, the vice-president, Dr. George W. Kosmak of New York, presided. Among the resolutions adopted by the Association were the following: **Resolved**, that the members of this Association pledge themselves to publish prominently, at least three times within the following three months, a copy of the official personal application blank with an explanatory comment on the proper procedure to be employed in transmitting the same to the Surgeon General's office. **Resolved**, that all medical journals in this country be urged to present editorially the needs of the military services in this crisis and the immediate necessity for securing the full complement of medical officers for the same. An appropriation of $250 was mad ef or carrying out the provisions of this resolution. Resolutions were also adopted providing for the appointment of a committee to be known as the Food Resources Committee, which should do all in its power to stimulate interest on the part of all the members in a free and full discussion of the food problem as time goes on. The Association also voted to expend $500 for the purchase of Liberty Bonds. The Association further pledged itself to unlimited effort in stimulating recruiting for the medical service of the army and appointed a committee to further this end. The annual banquet was held at the Hotel McAlpin on the evening of June 5, at which the speakers were Dr. Henry O. Marcy of Boston, an ex-president of the Association; Dr. Joseph Bloodgood of Johns Hopkins University, who spoke on "The Duty of the Medical Man in This Great National crisis;" Major Robert E. Noble of the Medical Corps of the United States Army, on "The Needs of the United States Army;" Talcott Williams, Ph. D., Dean of the School of Journalism of Columbia University, on "The Duty of the Hour," and Dr. George F. Butler of Mudlavia, Ind., on "The Ladies." The following officers were elected for the ensuing year: President, Dr. George W. Kosmak of New York, editor of the American Journal of Obstetrics, Gynecology, and Diseases of children; First Vice-President, Dr. Robert M. Green of Boston, editor of the Boston Medical and Surgical Journal; Second Vice-President, Dr. Seale Harris of Birmignham, Ala., Southern Medical Journal; Secretary and Treasurer, Dr. Joseph MacDonald of New York, of the American Journal of Surgery; Members of the Executive Committee, Drs. C. F. Taylor of Philadelphia, A. S. Burdick of Chicago, and D. S. Fairchild of Clinton, Iowa.

BOOKNOTICES.

The Medical Clinics of Chicago, November, 1916. Volume 2, Number 3, Published Bi-Monthly, by W. B. Saunders Company, Philadelphia and London.

The Eighth Annual Report of the Commissioner of Health for the Commonwealth of Pennsylvania. Part 1 and 2, 1913; Part 1 and 2, 1914.

These four volumes are very handsome and deals with valuable health statistics. Any one who wants to purchase a set of these books can do so by communicating with Samuel G. Dixon, M. D., LL. D., Sc. D., Commissioner of Health, Commonwealth of Pennsylvania. The price of each volume is not given.

Roentgen Technic (Diagnostic), by Norman C. Prince, M. D., Attending Roengenologist to the Omaha Free Dental Dispensary for Children; Associate Roentgenologist to the Douglass County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital, and Ford Hospital, Omaha, Nebraska. With seventy-one Original Illustrations. St. Louis, C. V. Mosby Company, 1917.

This is a rather small book of 140 pages. It is however a very valuable edition to the present knowledge to the Roentgen Technic. Its 71 original illustrations are very accurate and invaluable in connection with the reading matter. It is the most up-to-date volume of the kind on the market. Dr. Prince is an attractive writer, expresses himself well and his conclusions are always logical.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, June 1st, 1917. Owners and Publishers, Lea & Febiger, Philadelphia and New York. $6.00 per Annum.

We always like to recommend and refer to these volumes. I think the publishers would find the volume more popular, certainly more attractive, if they would do away with all paper binding and substitute cloth binding. The illustrations in this volume is no less numerous and appropriate than the volumes that have preceded it.

Handbook of Suggestive Therapeutics Applied Hypnotism Psychic Science. A Manual of Practical Psychotherapy, Designed Especially for the Practitioner of Medicine, Surgery, and Dentistry by Henry S. Munro, M. D., Omaha, Nebraska. Fourth Edition, Revised and Enlarged. C. V. Mosby Company, St. Louis, Mo., 1917.

Since the publication of the first edition of this book in 1907, Sugestive Therapeutics, has become a valuable subject to the thinking, progressive physician, surgeon and dentist. This book has striven to present the practical as well as the scientific side of psychotherapy to its readers. The majority of the physicians and dentists in active practice today did not have an opportunity while in school to familiarize themselves with this subject, either from didactic instructions or clinical observation. Laboratories of applied psychology that are springing up today in most of our large cities were unheard of as late as ten years ago. The Chapter on dentistry has been incorporated in the volume on account of the urgent demand for it by many prominent dentists in America. It ought to be valuable and interesting to any dentist. The Volume is a nice one of 481 pages. It is an attractive book, well indexed, well printed and well bound.

The Mayo Clinic, Rochester, Minn. 1916 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1,014 Pages, 411 Illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $6.50 net. W. B. Saunders Company, Philadelphia and London.

On account of want of space, a great deal of valuable material that has accumulated in the publication office has been omitted, although this volume 8 has over 1,000 pages including the index. Its 411 illustrations, dealing with almost every surgical condition are very complete, and very beautiful. The work of the artist is especially good. The printing is excellent. It is on a white enamel paper. All the books Saunders Company publish a special pain is always taken in getting up a complete index. This is especially true in this book. The surgeons or even the practitioners would do a wise thing to have these volumes go to them regularly as they are published.

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Miscellaneous.

BURNHAM'S ANTISEPTIC POWDER.

For Use in Extemporaneous Solution.

Changing Views on Wound Treatment—The remarkable results that have been obtained in the war hospitals of Europe through the use of certain alkaline solutions bid fair to revolutionize our views concerning the treatment of wounds. The day of toxic—and often irritating—antiseptics has passed, and in their place carefully selected alkaline agents hold sway.

Avoids Irritation—Through the aid of these agents (Borates, Chlorides and Sulphites) it has been found possible to sterilize infected wounds promptly, and this, not only without the slightest irritation or objectionable effect on the injured tissues, but on the contrary, with a very gratifying stimulation of the processes of repair.

A Definite Need—Study of the splendid work that has been done by the great surgeons who have striven so faithfully to lessen the distress and suffering caused by the war has made it plain that the alkaline treatment of wounds needs only to be placed on a practical basis to bring it into general surgical use.

A Satisfactory Product—Burnham's Antiseptic Powder has been evolved as a direct outcome of this need. Extensive chemical as well as clinical research has been given to the problem, with the result that a powder has been produced that meets every requirement of this newest conception of the rational treatment of wounds. Remarkably soluble and cleansing, it promptly neutralizes acid conditions, softens and dissolves inspissated secretions, dissolves toxins, destroys bacteria, rapidly allays congestion and inflammation, and promotes tissue healing and repair.

Broad Field of Use—A large number of clinical tests that have been made in the treatment of nose and throat diseases, genito-urinary affections, especially of the bladder and urethra, diseases of the mucous membranes and wounds generally, point so conclusively to its superiority for Gargling, Spraying, Douching, Irrigating and Cleansing, to other antiseptic products, that the place of Burnham's Antiseptic Powder has been established beyond all question.

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In Dentistry as a mouth wash

In treatment of Burns and Skin Abrasions (with bandage),

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In Pruritus—even in severe forms of genital, anal, diabetic, eczematous itching, K-Y Lubricating Jelly in a great majority of cases, will bring relief, or at least grateful alleviation.

To anoint the skin in these conditions, K-Y Lubricant Jelly is not only effective, but convenient and economical, since it can be used without staining or soiling the bed clothes or the patient's linen. If the part is washed before each application the best results are obtained.

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Food Shortage: An Appeal to Physicians.

A food shortage without precedent confronts the United States. Unless there is a change for the better ,the coming winter will see prohibitive high prices and consequent suffering from lack of food. The physicians of the United States, as guardians of the public health, are vitally interested because the health and the vitality of the people are at stake. It is in the power of the physicians to help relieve the food shortage by taking the lead in teaching people how to conserve the food supply. It must not be forgotten that conservation of the food supply is just as important and just as necessary as is increased production. Physicians cannot very well increase the production of foodstuffs, but on the conservation side of the problem they can be of inestimable service to the nation.

It is generally recognized that people eat too much. As a nation we are more inclined toward "living to eat" than toward "eating to live." The physicians, better than any others, can discourage this habit of overeating.

Knowledge of what constitutes properly balanced rations is not widespread. Housewives have not yet had opportunity to absorb the information gained through scientific study of the food problem by experts in domestic science. The result is that the American dinner table contains much that is unnecessary and often lacks things which should be there. The physicians of the land can correct this. They can spread corrective propaganda among millions of people, and they will be heeded because of the position of trust they occupy in American families.

Correct dieting on the part of American people is of paramount importance as a measure to guard against the food stringency that faces us. We must stop the waste of food by learning how to maintain our health and our strength on less than we are now consuming. In a word, I mean we must begin eating to acquire a proper amount of nourishment instead of eating to fill up. We must make a study of the nutrition in various foods and find out what will give the amount of nourishment we really need. When we have learned these things, our housewives can begin serving us with meals that will satisfy the appetite and provide us with plenty of nourishment without entailing any waste. With the waste eliminated the food problem will be practically solved.

There is no doubt in my mind as to ability of the physicians of the nation to make themselves of prime importance in this fight to conserve the food supply. They have the necessary information and they have at their disposal the channels through which it can best be disseminated among the people of the land.

An old adage says, "Go to the busy man to get things done." Appealing to the physicians to help the food conservation movement is surely carrying out the thought in the adage. The physicians will do their "bit" for the fighting forces of the nation. We confidently expect the medical corps to outstrip their European contemporaries in solving the surgical and medical problems of the battlefield and the camp. But it is as necessary to have food as it is to have live soldiers, even in a time of war, for without food there would soon be no live soldiers.

Therefore the "bit" that the physicians can do for their country is not limited to the service they can render to the army on the battlefield. They can serve the army in binding up its wounds, and they can serve the nation by showing it how to conserve food through the intelligent use of a smaller quantity than is now being consumed.

As one familiar with the food situation, I can say that the public has not yet been sufficiently impressed either with the need for more production or with the necessity for more economical handling. This is a time when one can do things that would seem presumptuous in normal times. Under that right, I call on the physicians of the United States to interest themselves in the food conservation campaign and to do all in their power to advise the public as to the imperative need for conserving to the greatest possible degree, the food suppl of the nation.—By J. Ogden Armour.

Dr. Greenwood has recently observed that Scopolamine and Morphine during labor give highly satisfactory results for both mother and baby from the use of this method of analgesia in a series of consecutive cases. In a series of 150 cases, he emphasizes the fact that success can be secured only under proper conditions of quietude for the mother and the constant attendance and observation of the operator throughout the entire course of labor. Of these 150 cases, only two patients failed to show satisfactory results from this method, giving a proportion of over 98 per cent. of successes.

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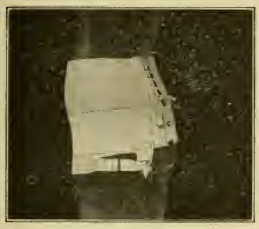

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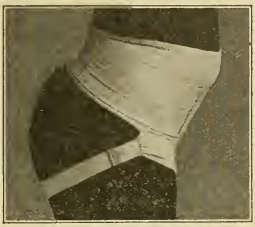

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The Hypochlorites, to be 100 percent. efficient, must be prepared exactly in accordance with the latest method (there have been three or four formulas) and fresh solutions must be made frequently. The process is involved and technical, requiring a trained chemist and considerable laboratory equipment, each batch must be tested and protected to prevent deterioration for the Hypochlorites are sensitive to light and heat. Few physicians and only the larger hospitals have the facilities for preparing this Hypochlorite Solution.

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The efficacy or antityphoid vaccination as a prophylactic measure in controlling typhoid fever has been clearly demonstrated from army and hospital statistics. We have reached that stage of preventive medicine where it is possible to recommend the use of the vaccine with confidence and authority as a matter of personal hygiene which will practically insure protection against typhoid fever.

Elsewhere in this issue the Eli Lilly & Company urges physicians to protect their patients by vaccination against typhoid and prartyphoid fevers. Summer and autumn are the seasons when protective measures are most important, since it is then that persons are more likely to have accidental or unusual exposure and the use of Lilly Typhoid Vaccine, or Typhoid Mixed Vaccine is recommended as the best method of preventing the disease and reducing the danger of epidemics. Further particulars concerning Lilly Biologicals may be had by addressing the principal office of the company at Indianapolis and a handy Vest Pocket Manual on Biological Therapy will be sent to our readers on request.

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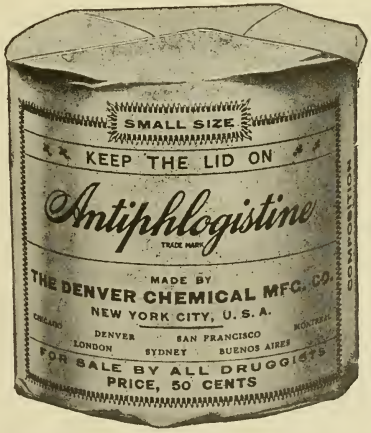

• **Bureau of Chemistry, U. S. Department of Agriculture:**

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I did not pay very much attention to a slight prick on my right index finger, until the pain and swelling were quite severe. After several days when the symptoms of septicemia were pronounced, and the condition had not responded to the use of local applications and antiseptic treatments, I called in our surgeon who advised the amputation of the finger at once. I was suffering intensely, and as a palliative measure I put on a liberal application of hot Antiphlogistine; the effect was instantaneous, the pain subsided, and the swelling was considerably reduced within a very short time. The application was repeated every few hours, and within one week I could attend to my work as usual, with the finger as good as ever. The instant relief from pain, the gradual amelioration of the condition, and the final result were the most remarkable I have ever seen.

G. W. Weaver, M. D.,
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The Charlotte Medical Journal

VOL. LXXVI CHARLOTTE, N. C., AUG, 1917. No.2

MALARIA AND FOOD SUPPLY.

By Albert J. Ochsner, Chicago, Ill.

A great deal has been written in the daily and weekly papers, in periodicals of all descriptions, and especially in agricultural papers about the necessity of putting forth every effort to produce more food in this country, especially now that such enormous quantities of food are being consumed by the non-producing millions engaged in the present world war. Has it ever occurred to any one that people could double the production of food in the Southern States if the entire working time could be employed which the farmers and farm laborers in these states now lose because of their inability to work during the part of the year when their work counts the most, because they are incapacitated on account of malaria.

The United States government has been engaged in making observations which show that the farmers in malaria infected portions of the country suffer directly to an enormous extent from this cause, but this loss is only slight as compared to the loss which comes from lack of development of their farms, because of discouragement and inability to induce new people to enter the field of agriculture in these regions where each acre of land if properly farmed will produce twice as much each year as it can produce in the northern states because two crops can be raised each year.

Imagine the prosperity that freeing of the farming population of malaria would bring to every one in the cities and villages, as well as to those living on the farms. Can this be accomplished practically? If it were possible to free every farm of anophiles mosquitoes it would be accomplished at once. In time this will be done by means of proper drainage, but that will not change the present food supply because it will require many years.

It can be done practically in any community which desires to do this by following out a course of treatment covering ten days, as follows:

Rules for Treatment.

1. Give an exclusive diet of hot soup for ten days' treatment.

2. On the evening of the first day give two ounces of castor oil in fruit juice or in beer foam.

3. At 6 a. m. of the second day begin giving a two-grain capsule of quinin (preferably bisulphate) with cover taken off, with one-half pint of hot water, every two hours night and day for thirty doses, being absolutely sure not to miss a dose, in order to keep fresh quinin in the blood constantly. It is important to insist on waking the patient at night in order that the intervals shall not exceed two hours at any time.

4. For the following six nights and five days give **absolutely no quinin**, but give a pill containing 1-50 grain of arsenious acid with one-half pint of hot water at 6, 9, 12, 3 and 6 o'clock.

5. Give castor oil as in rule 2 on the evening of fifth day.

6. At 6 a. m. following the sixth night, again begin to give two grains of quinin precisely as under rule 3.

7. After that give general tonics and simple nourishing food.

8. Avoid reinfection by the use of screens and remaining away from locations where infected mosquitoes abound.

The practical application of this plan will be fully described in an article under preparation by Dr. Wm. W. Seward of Surry Courthouse, Virginia, with full details.

For the present I simply wish to give a concise description of the method employed, in order that any physician who is sufficiently interested in the plan to make the experiment will have a working plan which has been tried and found effective.

Two nurses, or two intelligent, reliable lay women are employed, one for the night, the other for the day. No. 1 goes on duty in the family at 8 a. m., when she administers 2 grains of quinin in solution or in a capsule with the top taken off, with half a pint of hot water to every adult in the family at 8 and 10 a. m., at 12 m. and at 2, 4 and 6 p. m., when she goes off duty. No. 2, who goes on duty at 8 p. m., gives the same dose at 8 and 10 p. m. at 12 m. and at 2, 4 and 6 a. m. All children in the family are given quinin at the same intervals in doses to be described later.

This is continued for two consecutive days, when nurse No. 1 begins her work on family No. 2. Supposing the plan is begun on Monday, the nurses administer quinin and hot water to family No. 1 on

Monday and Tuesday until 6 a. m., Wednesday, to family No. 2 on Wednesday and Thursday, and to family No. 3 on Friday and Saturday. On Sunday no quinin is given to any one. On the following week the same treatment is administered in the same way to each family. By the end of two weeks three entire families are permanently cured of malaria, and all of its members will remain free from this disease unless they are again bitten by mosquitoes who have previously bitten persons suffering from malaria.

To children it is well to give the quinin in the form of tannate of quinin in chocolate lozenges which are very palatable. Infants under three years should receive not more than one grain every two hours.

If this treatment is carried out during the winter months, an entire community can be permanently cured of malaria.

It is important not to give quinin during the interval between the first two days and the second two days of treatment, because this would preserve the spores in their latent condition which would make the second series of treatment ineffective.

The same end can be accomplished by using an alarm clock which is set ahead two hours each time so that the intervals between the administrations of quinin can be definitely regulated, but it is better to have the work entrusted to some tem of treatment.
one who will actually carry out the sys-

In any community in which this plan of treatment is instituted the families having been freed of malaria are so enthusiastic over their improved condition that their neighbors are sure to follow their example, and with each new family that is freed of this disease the danger of becoming reinfected decreases.

TRAUMATIC ASPHYXIA.

By J. Garland Sherrill, M. D., F. A. C. S.,
Louisville, Ky.

Dr. Sherrill reports the following case: On October 21, 1916, W. L—.—, bridge builder, aged 35 years, was injured in the following manner: The top chords of a new trus were being placed in final position. L.— was helping make the connection when he was caught between the ends of the chords and squeezed, doubling him up and bringing his head down on his knees. The weight of the chords is very great—estimated by the patient that at least seven tons was the weight of the end which came down upon him. No accurate statement of the time this chord was pressing upon him could be obtained, but it must have been of brief duration. He presented marked ecchymosis and swelling over the head and forehead and down to the malar bones. This area was dark purple in color and clearly delineated by an abrupt margin where the healthy color of the skin joined the swollen discolored part. Pressure did not affect the discoloration. There was present a subjunctival hemorrhage on each side which was bright red, contrasting strongly with the purplish discoloration of the adjacent tissues—a striking appearance. Rupture of each ear drum with hemorrhage from the ear canal was noted. Bleeding also occurred from the nose. The patient was fully conscious and the reflexes were normal, with no evidence of cerebral injury. The pupils were equal and responsive to light and accommodation.

The diagnosis of traumatic asphyxia was confirmed by the subsequent history of the case. The discoloration of the skin cleared up promptly in about three or four days, that under the conjunctivae persisting much longer. The patient recovered without untoward incident, leaving the hospital upon November the eighth.

From the study of the literature at hand the conclusion may be reached that this condition usually results from sudden and forcible compression of the chest and abdomen, while the head and perhaps the extremities are not compressed. In this case, however, the neck was pushed forward firmly toward the chest, resulting in the constriction of the veins in the neck similar to that occurring from strangulation by hanging. This case seems even more strongly than the others reported to show that the dislocation is due to increased venous pressure, although most observers have held that this is of prime importance, and acts on the superficial veins of the face and head because of the lack of tissue supported by the fact that in the case reported by Bolt the discoloration occurred everywhere over the face and head except where a snugly fitting cap pressed upon the head. The same effect is shown by the pressure of the collar as noted in Winslow's case.

The pathology of these cases varies only in extent and degree and depends largely upon the amount of compression and the length of time it continues. It consists in discoloration of the skin from venous distention or hemorrhage in varying degree; subconjunctival hemorrhage, rupture of the ear drum with hemorrhage from the canal, and epistaxis,

and swelling of the skin. The latter and the discoloration also being limited to places that are not subjected to supporting pressure and usually extending no lower than the clavicle, although in some rare instances there is some discoloration in the axilla. Discoloration in the soft tissues disappears very promptly in the course of a few days; that of the conjunctivae at times persists for several weeks. Coincident injuries, of course, make the other pathological changes different in each case.

There are usually no cerebral lesions present, although in some instances transient blindness has been noted. This has been attributed to the fact that the veins going to the brain are supported yroperly by the surrounding tissues, which is not the case in the more superficial veins. In the latter the inadequacy of the valves can be proven by the fact that the injection of the vena cava in the dissecting room distends the superficial veins of the neck, while those of the arms are unaffected.

The symptoms of this condition are marked discoloration in the skin of the head, face and neck, extending down to the clavicle. Posteriorly there is in some cases marked extravasation over the trapezius muscles. The ears are sometimes not involved, neither is there discoloration or swelling under a tightly fitting cap, nor where the pressure of a collar supports the neck. The conjunctivae are very red and in striking contrast to the purple mottled appearance of the remainder of the skin. The lips and tongue may be somewhat swollen and together with the mucous membrane exhibit the same purplish tint as the skin, and hemorrhages may occur from the nose and ears. The patient may be momentarily unconscious, although this symptom is not frequently seen, and disappears in a short time. Of course one must not overlook the possibility of concomitant injuries of serious nature in these cases. The discoloration usually disappears rather promptly, except that under the conjunctivae, which persists for a longer time.

The prognosis is usually favorable, recovery taking place in most cases quite promptly. It will depend, of course, to a large degree upon the amount of pressure and the length of time which it is applied, as well as the gravity of coincident injuries. From the nature of the injury and its manner of occurrence, surgical aid can rarely be had immediately; however, when possible, the immediate use of artificial respiration and oxygen should be employed. Usually shock is slight, except where the accompanying injuries are severe. The subsequent treatment should consist in cambatting shock if it is present, keeping the patient at rest and meeting indications as they arise.

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THE RELATIVE VALUE OF THE OPERATIVE PROCEDURES FOR CORRECTING THE RETROVERTED UTERUS.

By Drs. D. W. and Ernest S. Bulluck, Wilmington, N. C.

There are at present about fifty recognized operations for the correction of the retroverted uterus. These procedures are based upon different conceptions of the cause of the displacement, and different opinions as to what results in the most ideal restoration. The various ligaments of the uterus have been plicated, shortened, lengthened or attached to various parts until it seems that the ingenuity of man can produce no new combinations. The selection of an operation is further complicated by the varying degrees of retroversion and the extent of the accompanying uterine disease or prolapse.

The retroverted uterus accompanied by symptoms cannot be kept in place by a pessary and relieved by tampons and douches. Patients who improve under such treatment will have their symptoms return after an interval. Surgical correction of the deformity offers a probable cure of the symptoms. About ninety per cent. of the operations resulting in permanent cure or improvement. Retroversions frequently occur that cause no symptoms and here no treatment is indicated. Where symptoms exist they frequently result from accompanying disease of the adnexa which may have proceeded or caused the retroversion. Obviously the treatment of these complications or the repair of an injured pelvic floor would have a most important bearing upon the outcome of the uterine correction. A corrected displacement cannot be maintained if an injured pelvic outlet has not been repaired. It is not easy among the multiplicity of causes, degrees, complications, and the means of correction to say just which procedure is best, and it is certain that no one operation will be found equally serviceable under all conditions.

The accompanying conditions having been relieved, the operation selected should be safe, permanent and give symptomatic relief. It must offer no barrier to future pregnancies and allow no adhesions that may cause intestinal kinks or strangulation. All these operations are simple, short and safe, about one fatality from all causes in every four hundred cases being an average. Permanence is hard to estimate. Our failures may appeal to others next time or discouraged, tolerate their symptoms. In other instances anatomical correction may be made without symptomatic cure, or the reverse may sometimes occur. Later pregnancies may increase the difficulty and our desire to have cured the patient may pervert our judgment. The operation having been instituted for the relief of certain symptoms; the result should be judged by their continued absence rather than the anatomical position of the uterus, which in health may vary within wide limits. Occasionally symptoms are attributed to an inoffensive uterus because its position happens to be unusual. A change in the position of such an uterus could not be expected to bring relief. Operations done within the abdomen obviate this source of error by permitting the recognition and treatment of such lesions as may be present. All operations for retroversion if properly executed, will bring the uterus to an anterior position and if dependent upon malposition, will relieve the symptoms. In selecting an operation therefore, we have only to know that its dynamics satisfy our sense of fitness: that it is permanent and that it offers no possibility of intestinal or gestative complications. Each originator claims that the operation that bears his name fulfills most completely all these requirements.

Since the operations and their variations merge into each other we will avoid confusion by not describing them by the names of their authors, but will limit ourselves to a discussion of the means by which the displacement is corrected. Paramount, is the repair of an injured pelvic floor without which no operation gives permanent results.

Fixing Uterus to Vaginal Wall—The work is done through a vaginal incision the abdominal contents cannot be inspected. Grave results would follow in the event of pregnancy. These operations are limited to a smaller number of women past the menopause and are seldom done at present.

Fixing Uterus To Abdominal Wall—This may be permanently accomplished by removing the area of peritoneum from the uterus at its junction with the bladder. Sutures are passed from this area through the rectus muscle, the tissues between are not approximated, and by tightening the sutures the uterine and rectus muscles are brought in contact. The union fixes the uterus permanently. Properly executed no raw surface remains to cause adhesions. If there is prolapse the operation is ideal, for it gives firm suspension to the pelvic floor, and produces a good anatomical result. The

operation should never be done to those who may become pregnant as the fixation of the uterus would interfere with its evolution and the evacuation of its contents.

Suspension of the Uterus to Abdominal Wall—This is done by scarifying the fundus and suturing it to the peritoneum at the bottom of the abdominal incision. Under the intra-abdominal presure exerted upon the organ it descends into the pelvis. The peritoneal attachment is dragged out into a narrow supporting band. There is no objection to this, however, for under normal conditions the round ligaments do not exert constant traction, but merely hold the long axis of the uterus sufficiently forward for the intra-abdominal pressure to be exerted on its posterior surface to maintain the organ in an anterior position. If prolapse be present this operation is insufficient for the band will not suspend the pelvic floor, but will elongate instead. This operation will permanently correct the displacement, but the resulting complications have led to its abandonment. In those subject to pregnancy the anchoring of the fundus holds inherent dangers. The suspensory band has often resulted in strangulation of the intestines, because of these possibilities the organ should be suspended in some other manner.

Abdominal Suspension by Ligaments—The round ligaments are caught about two inches from the cornu and dragged through the rectus muscle and sewed at its front. While the fundus is not fixed its range of motion is limited and we have seen abortions or dystocia follow this suspension. With fecundity it is not of use but with sterility it may be very useful, affording certain correction and strong pelvic suspension in cases of prolapse.

Extra-Abdominal Shortening of the Round Ligaments—This is done by shortening the round ligaments as they pass through the inguinal canal. This old operation still maintains its popularity. By it the uterus is drawn forward and upward and if the ovaries are prolapsed they are elevated. There are no instances reported where this has ever interfered with the intestines or pregnant uterus. The uterus more often resolves into its proper position following later pregnancies than after any other measure. The permanency of the adjustment compares most favorably with that of other methods. The shortening is done at the weak fascial insertion and the position end. Among the minor objections to the operation the round ligaments have been absent, they are difficult to find in the very fat and old, and occasionally the ligament breaks under traction. The greatest objection is that since the abdomen is not open the procedure is limited to cases of uncomplicated retroversion with a freely movable uterus. This type of uterus rarely gives symptoms, and the frequency with which diseases of the adnexa, especially adhesions, escape manual detection makes us never quite certain that we have such a case. When the operation is done under observation, the abdomen having been previously opened, the procedure brings about one of the most perfect restorations of which we are capable.

Intra-Abdominal Shortening of Ligaments—The round ligaments are shortened and the fundus consequently drawn forward and upward by folding the ligaments upon themselves, by attaching the ligaments to each other and the front of the uterus, by carrying the ligaments through the broad ligament and making it fast to the back of the uterus, and by various other ways; all of them having as their object the shortening of the round ligament. The value of this shortening is augmented by a similar effect on the utero-sacral ligaments. These operations are plausable and their results are fairly good. The suspension offers little or no opposition to pregnancy, but their support is not very strong. In event of prolapse their fixed points for traction are not high enough in the abdomen to aid by suspension. The uterus is made to depend on the weak distal part of the ligament the strong muscular end having been used to effect shortening. The good position thus obtained is often destroyed by later pregnancies. Where the ligaments are attached to, or passed through the broad ligament there may be interference with the venus circulation, of the broad ligament, which may cause congestive infiltration with dependent symptoms.

Realizing the limitations that each operation must have by reason of its nature, we may conclude that there is not one best operation equally suited to all cases. Where prolapse exists before the menopause abdomina suspension by the round ligaments with sterilization is best. After the cessation of the menses abdominal fixation is most efficatious. Where the pelvic floor is in tact and the uterus movable the shortening of the round ligaments in the inguinal canal which may be done by the extension of an incision into the abdomen made to confirm the diagnosis or to attack the lesions that may be present, offers the nearest resto-

ration to the normal, the greatest prospect of pregnancy and the most complete freedom from complications.

MENTAL DEFECTIVES.

By H. M. Bonner, M. D., Newbern, N. C.

In speaking to you relative to the mental defectives, I take it that we shall consider all mental defectives, for they are all a charge upon the State and must be cared for, the question is, How? This is a matter of grave concern, a matter of growing and absorbing interest.

The term Mental Defective is an inclusive term; including as I shall endeavor to show you the true criminal, the epileptic, and those whom we designate as the "feeble minded."

The study is interesting because of its perplexity, because of its enormity, because of its variety, and its variety is as great as that manifested by the victim of hysteria, of whom Shakespeare wrote:

"Age cannot wither, nor custom stale,
Her infinite variety."

Its study is vitally important, because of the rapidly increasing proportions which the question assumes, by reason of the greater numerical increase in this element in proportion to the population, and the attendant increase in the cost of maintenance.

In order to deal properly with this element it is necessary to know them, to know their trouble, and to know whence this trouble comes, then and only then are we in a position to deal intelligently with them.

The true criminal, not the occasional criminal, the epileptic and the feeble minded are so closely related, have so much in common, that it is convenient and profitable to study them together—the more so since it is not infrequent that we find two of these conditions manifest in the same individual.

I wish to show you as best I may that each of these classes is characterized by defective mentality—that they are degenerates—and that they do not reproduce other than their kind.

Benedikt in a paper read before the first congress on Criminal Anthropology, says: "We speak of the born criminal, but all criminals are born criminals. It is their organization which impels them to crime, just as the organization of the artist impels him to the study of the beautiful." And Tarde writes thus: "The degeneration whether moral or physical is in general the result of heredity. We but run back one or two steps in the line of descent to find the explanation of his anomalies. Hence it is a vain thing to pass over his parents and I know not how many other generations in order to demand of his misty ancestors the secret of his perversities or deformities." Says Garofalo: "In view of the congenital and hereditary nature of criminal propensities which appears established, we need not wonder at the proportion attained by recidivism—recidivism is the rule, reform of the criminal, the exception. Moreover recidivism of the codes is much narrower than recidivism proper. It is limited to particular cases, sometimes to special recidivism and again to recidivism occurring after a sentence of not less than one year in prison, or after a criminal as distinguished from a correctional conviction. And yet in spite of these limitations legal recidivism in France reaches a proportion of 46 per cent.; in Belgium 49 per cent, and in Austria 45 per cent." "It is the same individuals," as another author observes, "who always commit the same crimes."

Lombroso, the greatest crimnologist of his day, found an hereditary taint in 71 of 104 prisoners examined. Lombroso studied a child of 12 years in prison in Pavia, guilty of murder, who had six times been convicted of theft. Two of his brothers were thieves, two sisters prostitutes and his mother a receiver of stolen goods. Marro, in examination of 500 prisoners found 77 to 90 per cent. showing an hereditary taint including anomalies of age and character. Of 3380 juvenile criminals ofMettray, 707 were the children of convicts, and 368, of parents living in concubinage.

Of the inmates of the Elmira Reformatory 33.7 per cent. were children of the insane or epileptic and 38 per cent. the children of drunkards. Of 109 convicts examined by Thompson 50 were related to one another, 3 being members of one family and descended from a recidivist. Thompson noted also two sisters and three brothers, all thieves, whose father, uncles, aunts and cousins were all murderers. Thompson noted also a family of 15, 14 of whom were counterfeiters, the other apparently normal until two years later when he was guilty of arson.

Of 67 insane criminals, Moeli, found insanity or epilepsy in 61 per cent of parents, suicide or criminality in 15 per cent., insanity or epilepsy in brothers or sisters in 21 per cent. Five brothers and a brother-in-law of the Fossay family were convicted of participation in a robbery. Their grandfather and father had been hanged and two uncles and a nephew were in prison.

The Juke family of New York State furnishes perhaps a still more noteworthy influence of heredity. At the instigation of Dr. Harris the family history extending over two centuries was investigated by Dugdale, whose findings were as follows. Descending from one Max Juke (born between 1720 and 1740) were 540 legitimate children and 169 illegitimate children, of whom 200 were thieves and other criminals; 200 beggars or invalids, and 90 prostitutes—all descending from one drunkard. To which should be added as additional consequences 300 children dying prematurely, 400 men infected with syphilis and 7 assassinated. And says Garofalo, "This case is not unique." Stratton gives us yet another proof of criminality in the history of a family whose descendents numbered 834, of whom it was possible to trace the history of 709 with sufficient accuracy. Of the 709 there were 106 illegitimates, 164 prostitutes, 17 procurors, 143 beggars, 63 in hospitals for chronic diseases, and 76 criminals who altogether spent 166 years in prison.

In Italy of 3,881 prisonres examined by Sichert 27 per cent. were illegitimate. Of the habitual criminals 30.6 per cent. were illegitimate. To comprehend the importance of these figures it is necessary to recall the fact that 60 per cent. of all illegitimate children die within the first two years.

Heredity, you readily understand enters largely into the result. "Most of the children are the fruit of sin. They have no name to uphold; no rein to stop them; no mother to nurture the good and suppress the evil. They find it hard to earn an honest living and are inevitably drawn toward evil." Brace says that 55 per cent. of the criminals in New York State were without father and mother—and that 60 per cent. of those arrested had lost one parent or their parents were separated. Dugdale states that prostitution in the female is the analogue of crime and pauperism in the male.

Of 5,583 prostitutes examined by Parent des Chatelet 252 were founde to be sisters, 13 mothers and daughters, 32 cousins, 4 aunts and nieces. One of these unfortunates made to Lacour the following speech: "My father is in prison, my mother is living with the man who seduced me. She has a child by him whom my brother and I are bringing up."

A recent survey of all known prostitutes in Richmond, Va., showed 75 per cent. to be clearly mental defectives. A similar survey of about two years ago in Pittsburg, Pa., showed a still higher percentage of mental defectives. Lydston says that "The vast majority of prostitutes are born prostitutes, beginning their career between the ages of 13 and 15 years."

The physical and moral characteristics belong equally to the delinquent and the prostitute. Both are conected likewise with certain organic and hereditary tendencies. Locatelli says that in his opinion "prostitution like theft springs from viscious natural tendencies of certain individauls," and Sighele quoting Vidocq says "there are families in which crime is transmitted from generation to generation, and which appear to exist only to prove the old proverb "like father, like son."

Passing now to the consideration of epilepsy, Dr. iMlton Barr, in speaking of the epileptic phase says that "Epilepsy, whether associated with profound idiocy, or extraordinary genius is an abnormal condition in which contsant mental deterioration goes on." A genius is said to be "half brother to an idiot." I know one such genius who has two sons by two wives both of normal mentality. Both sons are pronounced mental defectives. A sister has one child likewise a defective.

Doctor's Jelliffe and White say, "The nature of the epileptic discharge and the destructive character of certain pathologic lesions which initiate it, indicates that the essential defect is not irritant but destructive." They say further that the genuine epileptic comes from badly tainted stock, that epilepsy may not appear in the ancestors but that they and often the collaterals show evidence of ill defined nervous disorders (migraine, chorea, paralysis and extreme nervousness) that epilepsy and feeble mindedness show a great similarity in their hereditary reactions and both appear to be due to a defect of the germ plasm—that is they are both recessives—as should be expected therefore the two conditions are frequently found associated. My own observation is to the effect that all mothers, the victims of migraine have one or more feeble minded children.

Dr. Alexander Johnson recently made the statement that two-thirds of all feeble mindedness is due to heredity, the other third to epilepsy and alcoholism. Dr. Weeks, the superintendent of the Epileptic Colony in New Jersey, in the study of 18 matings, one parent epileptic, the other feeble minded, found 82 children: 15 died in infancy, 10 between 2 and 14, 10 were too young for classification. Of the remaining 56, 28 were epileptic, 27 were feeble minded and the other insane.

Butler of iMnnestota, declares "that feeble mindedness produces more pauperism, degeneracy and crime than any other one cause. (Corroborative evidence as per the foregoing might be adduced ad infinitum).

Just as in France and England so in this country the size of the average family is continuously growing smaller—but while this is true the offspring of the defectives, legitimate and illigitimate, is in no wise decreasing. It is said that the fit alone survive, but the utter fallacy of this statement coupled with the existing class distinctions has occasioned one of our younger poets thus to exclaim:

"The unfit die; the fit both live and thrive
Alas, who says so? They who doth survive.

So when her bonfires lighted hill and plain,
Did bloody Mary think of Lady Jane.

So Russia thinks Finland, while her heel
Falls heavier on the prostrate common weel.

So Booth and Lincoln thought, and so the high
Priest's let Barabbas live, and Jesus die."

Mosby says that one-half the total cost of the Government is occasioned by the criminal, and that crime today is seven times more prevalent in proportion to the population than 60 years ago. In the archives of Pediatrics we find that within the United States there are 80,000 prisoners, 100,000 paupers, 500,000 insane, epleptic, feeble minded, deaf and blind. Professor Kellicott of Gucher College says that one in thirty of our entire population is either delinquent or defective or both.

Dr. Gertrude Hall of the New York State Board of Charities says that their expense has increased for the past several years at the rate of one million dollars per annum an dthat their annual expense now is $25,000,000 (the expenditures of this Board are entirely separate and apart from those of the New York State Hospital and Prison Boards). Seeing, if you please, that the number of known defectives is so great (and the greater number are really without institution walls) and that they are both actually and relatively increasing, we readily understand that society is endangered ("civil liberty, being ats its best, but the equipoise of contending forces.")

"The mistaken idea of seeking a cure for mental defects, doubtless has its root in a misapprehension of terms and in confounding idiocy with insanity. In the latter there may be found cure as for any other disease, but idiocy is not disease, it is defect and it is as rational to speak of restoring limbs to one born without limbs as of curing a defective brain. To replace what has never been placed is impossible.

Much may be accomplished by way of amelioration and improvement, but cure is impossible."

If I have shown you by the studies of many eminent scientists that the real state of these unfortunates is that of defective mentality, that it is heredity, and if you agree that like produces like, then I take it, that you must agree that a remedy must be sought.

Drs. Jelliffe and White say that "the only efficient prophylaxis is not to transmit the defective germ plasm." The remedy then is clearly sterilization or asexualization of all known defectives, except possibly those who require constant custodial care, and may be segregated.

Dr. Barr of the Pennsylvania School for the Feebleminded inquired of various similar institutions in this country and abroad (61-12 of whom replied) to know first—in what proportion of the inmates of your institution do you consider procreation advisable. They all replied none.

Again, in what proportion of the inmates of your institution do you consider procreation possible. They answered 80 per cent.

Lastly should a State law be enacted to legalize sterilization or asexualization? 75 per cent. gave unqualified approval; two saw no necessity, and one was doubtful of success. Barr says "the limited response from foreign countries would indicate either timidity in expression, or that ultra conservatism that is often the safe guarding of all advance movements."

Dr. F. Hoyt Pilcher, superintendent of the Institution for the Feebleminded at Winfield, Kansas, says "time has justified the procedure." He asexualized 58 boys, with a resulting gain in almost every case of marked improvement both mental and physical.

Dr. Everett Flood, superintendent of the Hospital for Epileptics at Palmer, Mass., reports 36 patients asexualized. The mental condition was improved in three cases, the moral in four, two klepto maniacs reformed, one who was salacious improved. The temper was improved in all but four. The sexual appetite seemed

to disappear in all but two, and appeared in them only periodically. The effect upon the epilepsy was favorable, the attacks ceasing altogether or returning as in a single case after two years.

You cannot legislate morals into a people, certainly not into those whose moral sense is wanting. The remedy is necessarily a process of elimination. Poisons are gotten out of the system in no other way, nor will any other means be effective in ridding the body politic of "These festering sores of society." This remedy, sterilization or asexualization, making procreation impossible, should be applied to all true criminals, epileptics, and those whom we designate as the "feebleminded." This is a growing problem. It must be faced squarely. And in order that society be protected, that the defective be protected against himself, it is only necessary to "get busy," divorcing maudlin sentiment, adhering only to our duty to ourselves and to posterity.

Authorities Consulted.

Lydston—Causes and Cure of Crime.

Mosby—Causes and Cure of Crime.

Lombroso—Criminology. Causes and Cure of Crime.

Garofalo—Criminology. Causes and Cure of Crime.

Barr—Mental Defectives.

Jolliffe & White—Nervous and Mental Diseases.

Weeks—Paper Statistical Study of Epileptics.

DRAINAGE FOR RELIEF OF ACUTE NEISSERIAN EPIDYDIMITIS.*

By Thos. V. Williamson, M. D., Norfolk, Va.; Genito-Urinary Surgeon to Protestant Hospital.

The diplococcus of Neisser when it enters the urinary meatus usually lodges in the fossa navicularis and begins the inflammatory invasion of the urethral mucous membrane from this point. By direct extension and progression, it spreads over the entire anterior urethra, in the greater percentage of cases passes into the posterior urethra and quite frequently involves the adnexa. It is unusual for the postate to escape whe nthe posterior urethra is the seat of pronounced Neisserian infection. The seminal vesicles, because they are more difficult of access owing to the peculiar course of the ejaculatory ducts through the postate and verumontanum, are not nearly so frequently diseased as the postate. But, acute Neisserian vesiculitis occurs often enough to make it a dreaded complication of urethritis. Whenever the ejaculatory ducts, the vesicles or the ampula of the vas defferens harbor gonococci, there is a possibility of further extension of the morbid process and at times the gonococcus continues its relentless course through the vas into the epidydimus and finally reaches the testicle.

There are only three ways by which the diplococcus can approach the scrotal contents—by the blood stream, through the vas or by the lymphatic system. No consideration can be given the blood stream as a carrier and contrary to the belief of many able physicians, a comparative study of the two remaining routes places the blame on the vas rather than upon the lymphatics.

We see any number of cases of inguinal adenitis in which thereis no involvement of the epidydimus and conversely the epidydimus may be acutely inflamed and the lymphatics show no evidence whatever of being implicated. We encounter but few cases of acute anterior urethritis in which we do not observe a slight inguinal adenoitis. It is not reasonable to assume that the epidydimus would escape so often if the lymphatics carried the infection. But, on the other hand, we rarely find an epidydimitis or an orchitis without a corresponding prostatitis or vesiculitis, never without a posterior urethritis while the vas is almost always enlarged, thickened and mildly inflamed. Then too, epidydimitis usually develops before orchitis showing that the gonococcus passes into the canal of the epidydimus before it reaches the testicle. Epidydimitis never occurs after vasectomy .

Whenever the posterior urethra is inflamed, the co-existing irritation of the delicate, highly specialized nerve endings stimulates, functionally, both directly and reflexly all the organs comprising the sexual group. This stimulation increases the output of semen, which passing through the vas must, by purely mechanical means, be an obstacle to the onward march of the gonococcus. The mechanical interference combined with the relative inaccessibility of the ejaculatory ducts accounts for the comparative rarity of trouble to the scrotal contents. It may be that the gonococcus does not have the same selective action on the columnar epithelial lining of the vas as it has upon the types of epithelium found

*Read before the Norfolk County Medical Society at a smoker given to the medical officers of the interned German ships in Norfolk, February, 1915.

in the urethra or postate. The character of the inflammation certainly differs in that it is, as a rule, mild rather than acute.

It may be, also, that the cillia on the vasal epithelium waving only toward the seminal vesicles prevent Neisserian extension.

Intense, excruciating pain is the cardinal symptom in either a well defined epidydimitis or orchitis and a clear knowledge of the surgical pathology is essential in order that we may appreciate the necessity for the institution of proper measures for relief. The canal of the epidydimus, lined with tall columnar ciliated epithelium, is small, flexous and intensely convoluted. The moment an inflammation begins within it, serous, serosaneous and pus secretion mixed with desquamated epithelium distends it. On account of its convoluted structure, this distension takes place in many directions at once so that each inflamed coil is pressing upon its neighbor. This inter-associated pressure, combined with edema, swelling and infiltration o fthe walls is responsible for the exquisite pain.

The capsule of the testicle known as the tunica albuiginia is dense, fibrous and inelastic. It is so tough that considerable pressure with a sharp knife is necessary to penetrate it. The results, when an acute inflamation with rapid glandular enlargement takes place, are readily conjectured. A serous effusion, which is really an acute hydrocele, very freqeuntly fills the sac of the tunica vaginalis so that there is pressure both within and without the testicle and epidydimus. This distention of the tunica vaginalis is, at times, so pronounced that when a canula is introduced into the hydorcele the fluid will jet forth for a distance of several feet.

Bearing in mind these pathological pictures, it seems rational, conservative and humane to take immediate and effective steps to relieve such distressing conditions. Quick relief lies in early operation.

Nitrous oxide anesthesia is ideal in these cases. Under it, the scrotum is hastily shaved and painted with iodine. If acute hydrocele is present, it is first drained with trocar and canula so that the contour of the epidydimus can be distinctly outlined. The epidydimus is then grasped with the finger and thumb and an incision nearly an inch in length made through the integument and dartos. The knife is then plunged through the walls of the epidydimus in the most dependent part and a generous opening, which permits free drainage, established. A cigarette or rubber dam drain is inserted and the dressings applied. Occasionally multiple incisions must be made to liberate isolated pus collections. In several cases I have made minute punctures in the tunica albuiginia to relieve pressure within the testicle. In doing this, care must be exercised to guard against making the punctures too deep or too large lest there be a resultant hernia of the testicular contents. Hernia will certainly occur whenever the opening is of any extent.

The results of this operation are brilliant. Pain ceases the instant pressure is relieved and when the necessity is great, the patient may return to work in two days. It is much better, however, to confine him to bed for four or five days. The swelling and induration do not subside immediately and the opening in the epidydimus persists for about ten days. This is to be desired as it assures free and prolonged drainage. In fact, if the opening closes too fast cauterization of its edges should be done to keep it patulous.

There is another result following the operation which is really more vital to the patient than either the cessation of pain or the early resumption of his duties. As a rule when the entire generative tract is so extensively morbid, much improvement throughout its length cannot be expected in less than six weeks. Following epidydimotomy, when vigorous treatment of the vesicles, prostate and urethra is instituted, the discharge stops in a few days after the operation and in two weeks the patient is often practically well. Of course, supplimentary treatment should not be begun until the patient is out of bed. This is a radical statement to make but with the ripening of experience my faith in the effect of drainage becomes more firmly chrystalized and at present, for this reason alone, I would unhesitatingly advise surgical intervention in every pronounced, well established case of epidydimitis.

I selected the descriptive words in the foregoing sentence with care for the reason that there are a number of mild cases of epidydimitis in which surgical intervention is unwarranted. Rest in bed, diet, suspension of the scrotum, vaccines and local applications of electro-positive colloidal iodine-iolagol or guidionine will suffice to control them. The iodine preparations are well worth a trial and I wish to call especial attention to them. I have had some splendid results with them in inflammations around the joints.

What is there to be said against the operation? With one weighty exception, the evidence is all in favor of it. Is

operation upon an epidydimus to relieve Neisserian invasion justifiable? When we approach the scrotal contents surgically, we are tampering with an important function which we might seriously impair or entirely destroy on the affected side. Careful pathological consideration seems to answer this question very satisfactorily. Remembering that the canal of the epidydimus is small, flexuous and intensely convoluted, it does not seem reasonable to look for restoration of reproductive functions in an organ thus anatomically and histologically constructed. It would be an unusual occurrence for this canal to preserve its integrity after it has been the seat of an inflamation which is characterized by so much infiltration and in which, owing to their very contiguity, there is so great a likelihood of adhesive union of its walls. The laws of chance are three to one against it and we have a strong element of certainty to guide us in our deliberation. We know that 65 per cent. of all men who have suffered a bilateral epidydimitis are sterile. The remaining 35 per cent. very probably being mild cases. This sterility is due to the obliteration of the canal and, in a surgical sense, it is just as logical to expect the canal to remain patent after all pus, desquamated epithelium and fibrin is drained from it as if these secretions were left undisturbed to be absorbed. The hope of conservation of function should not deter for conservation is just as likely with operation as without it.

In times of military necessity, when operation will return a man to duty in one or two days, there is no question as to which course we should pursue. The gonococcus is at all times a serious menace to the efficiency of both industrial and military organizations. The more strenuous the effort a gonorrheal carrier is called upon to put forth in the performance of duty the greater is the possibility of disabling complications and sequellae. The yearly sum total of disability from venereal diseases in every walk of life is appalling. It is distressing and lamentable that, at the very time when the highest type of service is demanded, the danger is greatest. Professor Ehrlich, when he gave the world Salvarsan, eliminated the menace of syphilis to such an extent that it is negligible from the standpoint of organization efficiency, but the aspect of gonorrheal conditions is unchanged. Any method either medical or surgical, which will better these conditions is a distinct advance. It matters not how drastic or radical this method is we are duty bound to employ it. In great crises where the public welfare is in question, we can not deal with an individual in a cosmetic or a physiological sense. As surgeons, we must act so that our efforts and the results they achieve redound the best interest of the cause we serve. Restoration of efficiency is our goal; all other considerations are of secondary importance.

In the discussion of this paper the German doctors brought out the following point which is very important. During the second week of a specific urethritis it is the practice in the German navy to massage the prostate and vesicles once a day for about a week. Since this course has been pursued the number of cases of epidydimitis is very small. In fact this complication is at present rarely encountered in that branch of the service.

PELLAGRA IN THE UNITED STATES.

By E. M. Perdue, A. M., M. D., D. P. H., Kansas City, Mo.

A painstaking research covering a number of years, conducted according to the most scientific criteria by Professors Alessandrini and Scala of the Institute of Experimental Hygiene of the University of Rome, leads to the following fundamental conclusions as to the cause, prevention and cure of pellagra in Europe.

1. Pellagra is a chronic acidosis due to the presence of colloidal silica in drinking water derived from clay soils lacking in carbonate alkalies.

2. That pellagra is prevented by providing a drinking water containing a proportion of carbonate alkalinity sufficient to neutralize the action of the colloidal silica.

3. That pellagra is cured by the administration of neutral sodium citrate, or any other alkalai capable of neutralizing the toxic action of the colloidal silica. ministration of neutral sodVV shrdl uo

Since these propositions have been proven beyond all honest controversy. scientific candor, to say nothing of humanitarian motives and professional ethics, would dictate their application to like conditions in the United States. It is no stretch of imagination to state or to assume that an identical disease would have the same cause in Italy and in Mississippi, Arkansas and Tennessee. In truth, the honest seeker after the facts would quickly assign the same cause and adopt the same treatment.

In Europe, pellagra is endemic in Spain, Portugal, Italy, the Tyrol, the Bal-

kan States, Roumania and Bessarabia. That is, it is endemic in those countries where the soils are clays derived from the weathering and disintegration of the ignous and crystalline rocks. Such soils are always clays. At first they contain a large part of their original alkalies. As a result of improvident agriculture and the leaching and erosion of many years the alkalies are transported to the sea and the acid silicates remain. Pellagra in Europe is essentially a disease of a fixed agricultural population living upon an eroded and exhausted soil of determinate geological origin.

The same conditions prevail in the pellagrous area in the United States. The endemic pellagrous area coincides with the geological distribution of clay soils. Pellagra is endemic along the coast from Maryland to Texas. It is found on the transported clays of the Atlantic and Gulf Coastal Plain and on the residual clays of the Piedmont and Ashland Plateaus. The great "Limestone Troughs" of the Appalachian Mountains are in a great measure immune except where their soils are made highly silicious by the predominance of Devonian, Missippian and Pennsylvanian shales. The Missippian and Pennsylvanian shales of the Carboniferous furnish silicious soils to parts of the western slopes of the Appalachian highland. The Ozark, Boston, Oachita, Arbuckle and Wichita Mountains contain the ancient rocks which have furnished the shales and clays to Missouri, Arkansas, Oklahoma and parts of Texas. Similar areas exist on the Pacific Coast. The Glacial Drift supplies the pellagra of the northern states. The occurrence of pellagra in the southern states is merely a coincidence of geology and latitude. It has no relation to diet, domicile, labor or sanitary environment. The insinuation that the people of the South are underfed is a gratuitous insult, and the wide acceptance of this insult is unworthy the traditions of a proud people.

The work of Alessandrini and Scala was first published in Rome in a Preliminary Note which bears the date of May 22, 1913. Upon the first notice of this Preliminary Note, the writer wrote to the authors and secured a copy. This he translated into English and published and distributed free to the profession one thousand copies. He also published articles in Medical Council, American Journal of Clinical Medicine, New Orleans Medical and Surgical Journal, Journal of the American Association of Progressive Medicine, Ellingwood's Therapeutist, Western Medical Times, the Texas Medical Journal, the Homeopathic Recorder and the Eclectic Medical Journal.

Alessandrini and Scala published their complete monograph in 1914 and sent the writer a copy with the request that he translate it into English and publish the translation in the United States. For this publication they forwarded the original half tones and plates for illustration. During this interval the writer conducted a parallel research in the United States and confirmed the findings of the Italians. Their entire work and the work of the translator is now before you in one volume.

The research of Alessandrini and Scala, although scientific and correct, giving the specific cause, prevention and treatment of pellagra, encountered much opposition from organized research in the United States. Their objections have been stated in the negative: The research was not done in Germany, it did not bear the label "Made in Germany," it did not smack of the Kultur spelled with a K, it did not bear the trademark of Ehrlich, Wassermann or Abderhalden, and had not been given to the American profession through one of the great "authorized" and endowed research laboratories or universities. For these reasons, although truthful, sufficient and final, the research, being Italian, was "unscientific."

Now this opposition, based entirely upon prejudice, was unwarranted upon the very grounds assigned. To the Latins we owe much in Tropical Medicine. Dubini discovered the hookworm, Laveran the plasmodium of malaria, Grassi, Bignami, Marchiafava and Celli are among the most noted names in the study of malaria. The Italians have been students of pellagra for many years.

But the Italian research made a stirring appeal to the American people and the American medical profession. It was decided that two lines of counter research were necessary to counteract it. For one of these a research worker was chosen whose name sounded as German as possible. Scurvy was chosen as the disease most readily confused with pellagra. The site for the research was chosen in a very pellagrous state. The prestige of the United States Public Health Service and the frank of the Government were invoked for the purposes of propaganda. And from this we have the monstrous assertion and the gratuitous insult that the people of the south are underfed!!!

The second research bore the stamp of the Carnegie Foundation and the Rockefeller Institute, and emanated from Van-

derbilt University, at Nashville, Tenn. It was undertaken with the avowed purpose of counteracting the influence of the Italian research, and Nashville was selected as the site as stated, because the water supplies of Nashville are hard or limestone water. Both these researches overlook essential conditions and evidence that poverty of scientific acumen which is such a disappointing characteristic of American research. Both were unscientific in conception, both erroneous in conclusions.

The etiology of pellagra having been established beyond controversy by Alessandrini and Scala, it becomes our duty to apply ourselves to prophylaxis and treatment. This we owe to the good people of the South. Since pellagra is a mineral acidosis, its rational treatment falls within the classical lines of the treatment of all such conditions:

1. An antidote to the poison.
2. Elimination of morbid materials.
3. Building up the depleted organism.
4. Symptomatic treatment of the manifestations.

The natural antidotes to the poison of colloidal silica are the electrolytes which render the silica inert and which neutralize the acid already free in the organism. These are:

1. The alkaline carbonates, that is the carbonates of sodium and potassium.
2. The carbonates of the alkaline earths, that is the carbonates of calcium and magnesium.
3. The hydroxids of the same alkalies.
4. Neutral organic salts of the above which are converted into carbonates in the tissues.

Alessandrini and Scala cured pellagra in Italy by the hypodermic administration of one cubic centimeter of a ten per cent. solution of neutral sodium citrate, daily at first for one or two weeks, then on alternate days to the conclusion of treatment. The average case required about sixty days of treatment and about thirty injections. The pellagra was cured without change of diet, domicile, labor or sanitary environment. This mode of treatment is meeting with success in Italy, and all over the United States.

Physicians in the United States are curing pellagra by the administration of sodium carbonate, liquor calcis, milk of Magnesia, and "hard water." The symptoms are treated symptomatically. The diarrhoea, the pyrosis, the digestive disturbances, the erythema, the nervous manifestations are treated by the well known remedies indicated in each individual case. There can be no rule or routine except as to the antidote. The whole field of curative materia medica is open to the trained prescriber.

As an example of the use of the indicated remedy, a prominent physician in the pellagrous area reports the following case:

Patient, a woman in the advanced stages of pellagra. Had marked cutaneous manifestations and digestive disturbances and was insane. Under the administration of sodium citrate she recovered completely as to physical symptoms, her skin cleared up and she regained her former weight, but remained insane. Her insanity was of the loud, loquacious type, and her language was indecent and obscene. Stramonium was the indicated remedy. A few doses cleared up the mental symptoms and the recovery was complete.

An important point to observe in treatment is the fact that all ordinary cases will improve and eventually recover if they are taken off their usual drink of silicious soft water and put upon hard water whose hardness is due to the carbonates of calcium and magnesium. It is equally important to recognize that permanent hardness in water caused by the sulphates and chlorids of calcium and magnesium aggravates the pellagrous condition. Many mild pellagrins from the southern states move into regions where the water has a temporary hardness and recover without any treatment.

The prophylaxis of pellagra consists in providing a drinking water containing bicarbonate of calcium and magnesium in quantity sufficient to antidote all colloidal silica in solution. A careful examination of the analyses of the sources of potable water in the United States made by the State and National Geological Surveys, discloses the fact that this silica averages about 20 parts per million. In many parts of the country it attains 25 parts per million. A further study of these same waters discloses that the calcium is lower than this in all the pellagrous area. In the partially pellagrous areas such as Tennessee and Kentucky, the silica and calcium in the potable waters are nearly equal, contiguous localities having a preponderance of the one or the other as limestones or shales contributed to the formation of the soils. This is shown in the analyses of the Tennessee and Cumberland rivers and of springs and smaller streams all over these states. It is further shown by the scarcity of pellagra in the limestone regions and its greater prevalence in those parts

of these two states where the soils are derived from the Carboniferous shales. For these reasons the so called research emanating from Nashville is utterly unscientific and wholly fails of its announced purpose in denying the truth of the reasearch of Alessandrini and Scala.

In all pellagrous areas in the country, all springs and wells should be thoroughly cleaned. They should be walled with good limestone laid in Portland cement mortar. They should be curbed and covered so that no clay can wash in from above. Good limestone broken to about two inch mesh should be placed in the bottom of such springs and wells about a foot deep. Some quick lime should be placed in the water from time to time. If these precautions are impractical for any reason, lime should be added to each bucketful of drinking water drawn.

In cities in pellagrous areas, all water reservoirs should be walled with concrete made of broken limestone and Portland cement. Broken limestone should be placed on the floor of such resorvoirs. Sufficient lime to neutralize the silica content of such waters should be used as a soagulant. Where filters are used, a part of the sand should be fine screenings from crushed limestone. The alkaline content of the final product of any system of water works can be controlled and determined by well known methods of titration. A titration with decinormal sulphuric acid against methyl orange as an indicator is all that is necessary to insure a safe water.

Now these observations are not so profound as to require submission to the Rockefeller Commission or the Carnegie Foundation. They are scientific, and therefore simple. There is no abstract or abstruse discussion of deficient proteid or vitamins, no toxin or antitoxin, no fixation complement or immunizing body. It is all reduced to the simple proposition of drinking soft water coming from a clay soil deficient in alkali. It applies to man, the lower animals and to plants. The lower animals are as susceptible to pellagra as man. Horses, cattle, dogs and cats are also its victims. It is readily communicated to the laboratory animals in drink and food. It is not contagious, infectious or inherited. It is a simple mineral poison.

The occurrence of pellagra in the south is simply a coincidence of geology and latitude. This is also emphasized by the flora of the pellagrous and immune areas. Pine trees grow only on highly acid soils. Pellagra has the same distribution as pine timber. The prairie regions are destitute of trees because of their alkalinity. The prairies are practically immune to pellagra. The observation of some of these simple facts will go far to clear up these controverted points. Research is a study of the obvious. Far too long we have been stumbling over gold nuggets while chasing butterflies. Let us look at the simple truth, if only once.

THE TRAINED NURSE.*

By Gaston Torrance, M. D., Surgeon to The Birmingham Infirmary, Birmingham, Ala.

The establishment of training schools for nurses arose from the experience of army hospitals in European wars, especially the Crimean.

In France the nursing is chiefly in hands of the Catholic sisters. In Russia sisters of mercy have done the nursing since the Crimea; the same conditions exist in Italy. In 1883 "St. Paul's Home for trained English speaking nurses" was started in Rome by a few graduates of American and English schools.

In Germany many Protestant and Catholic systems have become famous. "The Institute of Deaconesses" was established at Kaiserworth in 1836—in after years, Miss Nightingale completed her early training here, which made her such a successful advocate of thorough instruction in nursing.

In Vienna the nursing is done by sisters. In England female nurses in hospitals are mentioned as early as 1760, and in 1791 they were endorsed by the governors of the London Hospital.

In 1860 a training school was founded at St. Thomas' Hospital (London) through the generosity of Miss Nightingale. The New York State Charities Aid Association made special study of this school and it was taken as a model for Bellevue Hospital School as well as for most of the other American schools.

In the latter part of the eighteenth century Dr. Valentine Seaman gave a course of twenty-six lectures to the nurses of the New York hospitals relating to nursing and hygiene. These lectures were published in 1800 and were the first recorded effort for the improved training of nurses in the United States. In Philadelphia in 1838 the Society of Friends formed a nurses' society which raised the standard of nursing and relieved the Catholic Sisterhood of doing the work alone. In 1873 training schools were established almost simultaneously in New York, New

*Read before the 1916 graduating class of nurses of the iBrmingham Infirmary.

Haven, and Boston and from this year dates the impetus to the improved nursing system which has led to the establishment of training schools in almost every city in this country.

An effort was made to raise the standard, but, as the superintendents of the training schools came from these schools, the task was a difficult one. During the World's fair among the many congresses held, was one of trained nurses, which was a subsection of the hospital section of the Congress of Associated Charities. This was the first time in the history of nursing in America that the nurses had come together as members of the same profession. The most important result of this meeting was the organization of the "American Society of Superintendents of training schools for nurses," and the progress made since this time is due chiefly to the efforts of this society. To encourage interest and enthusiasm, alumnae associations were organized. Two years later thirty-one were reported, and steps were taken to form a national association, which held its first meeting in April, 1898, as "The associated alumnae of the United States and Canada." Since this time the membership has steadily increased. The next important step was the establishment of a nursing Journal and in October, 1900—two years after the organization of the association—"The Ameircan Journal of Nursing" was started under its auspices.

Opportunities are constantly opening up by which the graduate nurse can do her share in bettering social conditions. Splendid work has been done in New York by the "Nurses Settlement" which is located in the densely populated East side. "It aims in addition to nursing the sick poor to be to the neighborhood all that the College Settlements stand for."

More and more attention is being paid to instruction in invalid dietary. In some schools a teacher is engaged in this branch alone and the pupils take a regular four to six weeks' course of study in food constituents and the preparation and serving of invalid diet. The superintendents are realizing the importance of giving more detailed and systematic teaching in the ethics of nursing—the constant observance of which is just as important to the graduate as that she should be an expert in practical work.

"The women today have not, as a rule, a thorough, systematic, practical knowledge of the details of housekeeping so essential for one who expects to become a good nurse and a good manager in the ward."

For these nurses an attempt has been made in one school in Scotland—in one school in London, and one in the United States, to give the probationers, before entering the wards, a so-called preliminary courses in household economics, in the theory of their work and in the elements of nursing.

HABIT FORMING DRUGS AND THE WAR.

By Clarence King, M. D., Franklinville, N. Y.

Our government at Washington will undoubtedly take precautions to prevent the enlistment or draft of men into the army or navy who are addicts to the use of any of the ordinary habit forming drugs. In fact the physical condition of such habitudes will exclude them from service in the great majority of cases. But aside from the question of their health the problem of supplying them with their accustomed dope and especially if stationed at the front, as well as the expense thereof, would impose a heavy and unnecessary burden upon the commissary department. And this, of coruse, our government will wish to avoid even if these addicts would make as good or nearly as good fighters as though not thus handicapped.

But there are other drugs than those commonly classed in this category and other habits to which the government will be obliged to acquiesce. To provide these substances and to distribute them among the soldiers will be a task of no small proportions. Thus, the use of caffein and theine, as contained in coffee and tea, has become a nearly universal fixed habit with us in civil life. Most of us have come to rely upon these beverages as our daily tonic and stomachic and would miss them as certainly, although not as seriously, as the opium addict misses his drug. The boys at the front will demand their office as part of their rations and there can be no valid objection to its use, aside from the difficulty in supplying it. Its value as a sustaining tonic is well established while it is considered second only to cocoa in maintaining the strength and endurance of the body under severe exertions.

Another enslaving drug is tobacco. No drug or beverage has made a greater number of habitudes among our male population than this and many are reaping its ill results while few if any have received actual benefit. Boys much too young for military service, under the example and careful coaching of the public and with the passive consent of the government,

have formed the cigarette or other tobacco habit. And now many of these can not pass the rigid physical examination demanded for the army on account of irritable heart, disordered digestion, enfeebled respiratory function or general poor health with anemia.

To meet the demand for tobacco in the army and especially in the trenches far from the base of supplies will be a difficult matter. Tobacco is bulky, although fortunately not very heavy. It calls for pipes and matches. Both tobacco and matches must be kept dry and their supply must be fairly constant, for the soldier with his other necessities can not carry a large stock on hand. He must have ammunition, food and water and none of these can be neglected or crowded out by tobacco.

Now, looking at the economic side here at home, what do we find? Our President is urging conservation of resources, increased production of foodstuffs and the avoidance of all kinds and amount of waste. Congress will or has passed laws to protect our grain supply for food purposes and to prevent its being shipped to the neutral nations so as to be lost to us and our allies. And yet hundreds of acres of our most fertile land in our most favorable climates, ideal conditions for gardening, are given over to the raising of tobacco; and this despite its having absolutely no nutritive value whatever. Moreover, thousands of people are employed in the cultivation and curing of tobacco and the manufacture and vending of tobacco products—a large army withdrawn from food or constructive production. And still further, hundreds of thousands of dollars are diverted from real productive industry to satisfy a habit which has little more to recommend it than the eating or smoking of opium. If tobacco supplied anything of positive value to the economy all this extravagance might be condoned, even in war time. But the only merit the drug seems to have is that "moderately used, it quiets restlessness, calms mental and corporal inquietude and produces a state of general languor or repose, which has great charms for those habituated to the impression." But these, with the possible exception of the last, may be obtained when necessary by other and less objectionable drugs and without the often unpleasant or injurious after effects.

We have written these words not in a spirit of antagonism or fault finding but simply to call attention to one big extravagance and wastefulness which is hampering our national "conservation of food" program.

ABSCESS OF THE BRAIN. REPORT OF A CASE.

By Charles M. Remsen, M. D., of Atlanta, Ga.

One of three main etiological factors is usually exhibited in brain abscess. (1) **Chronic suppurating ear.** 40 per cent. or more of all cerebral abscesses result from this cause alone. This is due to the close relation of the venous circulation of the inner ear with the cerebral sinuses and of the cells and antrum with the adjacent cerebrum. Most frequently in the temporo-sphenoidal lobe, they occur next in freqeuncy in the cerebellum, but may be located almost anywhere, even on the opposite side of the brain.

(2) Head injuries. These may have occurred year sprevious and the resultant softening, hemorrhage or low grade infection here resolved slowly into an abscess. This group is responsible for some 25 per cent. of localized cerebral suppurations.

(3) Pulmonary suppurations account for a large majority of the metastatic brain abscesses, which number some 15 per cent. of the total. General septic states of local purulent inflammations, tuberculosis, etc., form a small quota.

Brain abscesses nearly always terminate fatally if allowed to pursue an unmolested course. 50 per cent. or more are saved by operation. Hence, it follows that surgical measures must be applied the moment an abscess is diagnosed.

Concerning the diagnosis, the coexistence or **previous existence** of the main etiological factors as enumerated above must lend considerable aid in finally differentiating intracranial disturbances. With these in view then, the main factors in diagnosis are:

(1) The symptoms of suppuration.

(2) The signs and symptoms of local cerebral disturbances due to the presence of the abscess.

(3) The general disturbances due to increased intracranial pressure.

Of the first, (a) polymorphonuclear leucocytosis; (b) varying temperature, often an afternoon rise; (c) anemia; (d) emaciation; (e) chills, and (f) sweats constitute the main symptoms. Of these, the change in the blood picture and the

temperature curve are most important.

Local cerebral disturbances naturally exhibit a variable symptomatology. One must carefully and methodically search for disturbances in smell, taste, hearing and vision; the size and action of the pupils, dropping of an eyelid, the motion of the eyeballs, disturbances of facial sensation, palatal reflexes, and other functions of the cranial nerves. Next the intellect, memory, judgment. Signs of weakness in the usculature of the face, arm or leg on one side, or of convulsions, perhaps Jacksonian in type; and the reflexes; and the gait, whether ataxic (cereballer or frontal?) or not; nystagmus, hemianopsia, the aphasias—all these and others have their prototypes in central lesions, which coupled with signs indicative of the presence of pus, practically complete the indications for operation. Of singular note is the importance of a certain symptomatology should it exist: monoplegia followed in sequence by a paralysis of that group of muscles represented certainly next to the affected group and so on until a complete hemiplegia exists, perhaps after several days. This peculiar sequence is, as a rule, quite unlike other intracerebral conditions and if present should be given its proper weight.

(a) Headache is the most important of the symptoms of **increased intracranial pressure.** It may be intense, it may even be periodic, but usually it is a symptom —and an important one. (b) Nausea and vomiting may or may not be present. (c) Optic nerve head edema, unless the abscess be cerebellar, is not common, but if present, will strengthen the diagnosis. (d) Stupor or mental torpor may occur.

Finally, (a) localized tenderness; (b) a heightened percussion note; (c) an X-ray shadow, or (d) an area of increased temperature may assist in the localization of the disturbance.

In the stage of inception meningitis symptoms may be prominent, as an intense headache, vomiting, irritability or stupor, sweats, chills, leucocytosis. The pulse may be slow, however, and the temperature subnormal.

As localization and encapsulation take place, the so-called "latent" period, which may extend over a period of years, evidences itself by a symtomatology as seen earlier in this paper, which may require a tedious, medical unraveling.

The terminal stage, which may be quite sudden, follows a burrowing of the abscess into the medulla or pons, a rapid extension and destruction of the hemisphere, rupture into the ventricles, or into the subdural space causing internal pyocephalus or a diffuse, purulent meningitis. Hemiplegia of the apoplectic type may occur, or a hemiplegia consequent upon a succession of monoplegias, nystagmus, hemianopsia and so on may evidence themselves. Death usually results.

In the **metastatic abscesses,** the sylvian arteries are most frequently the recipient of the germ-laden foci and hence, the more prominent the paralytic features from the start.

Generally speaking, cerebral abscess may be quite difficult of diagnosis. A careful history and search for the etiological factors and the correlation of perhaps a single symptom of pus (q. v.) with one or more of the signs of local functional disturbances and perhaps of general increased intracranial pressure will perhaps clear the diagnosis.

The method of attack is still a source of some dispute but no hard and fast rules may be followed. One may not indiscriminately puncture through the intact meninges in order to locate pus. This woul dmerely invite a general meningitis should the needle reach its objective. Nor may we puncture indiscriminately with no thought of the resultant cerebral edema. Perhaps the operation of choice is the subtemporal muscle splitting approach with removal of enough bone to allow a generous view of the cortex. One should aim, in the event the abscess is located, to wall off the surrounding subdural space before opening and draining. Perhaps an interval of one to three days may be allowed to elapse. Then, evacuation and drainage with soft rubber tubing. Removal of the abscess wall may be accomplished if necessary. In any case, the decompressive opening is of extreme importance as the edema resultant upon manipulative procedures may be entirely responsible for a fatal issue should the cranial walls be intact. Naturally those cases suggesting posterior brain or subtentorial involvement as ataxia, nystagmus, early optic neuritis, hemianopsia and the like, require a change in the operative field. The same principles apply.

A recent case, male, aged 42, exhibits to a startling degree the explosive character of the disease. Suffering from a pulmonary abscess, as seen in the X-ray, this patient on entrance showed a mental inertia and a slight weakness of the left facial muscles. An intense headache of fourteen days' duration existed. Cerebral abscess suggested itself to Dr. E. C. Thrash who referred this case to me. He was sent to the hospital, no temperature

existing, for observation. Thirty-six hours afterwards he became unconscious suddenly, the temperature rose to 104.2 and respiration became labored. Left hemiplegia, Babinski and Kernig's signs existed. Pupils negative. Leucocytosis, 24,000. A lumbar puncture was performed—(had the symptoms suggested a less diffuse process this would not have been performed as the relief of intraventricular pressure has been known to determine the rupture of an abscess)—and the cell count was high. Permission for exploration not granted until seven hours later. At that time the patient's condition was desperate but it was of pressure might be a factor in tiding the patient over into a less desperate stage. A subtemporal trephine opening, (September 27, 1916, Dr. Remsen); no anaesthesia, was performed without removing the patient from bed. A large amount of pus and disintegrated cerebral tissue was evacuated to no avail. The respirations immediately improved, were no longer labore dbut it was impossible to follow this procedure up with further decompression—and five hours later, he collapsed and died suddenly. Such a case is not uncommon but it merely calls to mind the danger attached to intracerebral suppurations, nearly all ending fatally and yet over 50 per cent. curable by intervention in all but the terminal stage.

POLIOMYELITIS.

By L. T. Royster, M. D., Norfolk, Va.

Poliomyclitis is endemic in almost every country of the globe. Sporadic cases occur every now and then, to which practically no attention is paid, since they do not spread. Even no quarantine is generally maintained on these cases. Every once in a while, however, in some large center of population, it assumes an epidemic type and very large numbers of children are affected. Such an epidemic has recently occurred in the vicinity of New York City. Occasionally small outbreaks occur in various localities. I have seen as many as five or six cases in this locality at the time in past years, and its frequency here can be judged by the fact that on my case records for the past four or five years there are over two hundred cases which have had polio.

Etiology.

The disease is caused by a filterable virus which has been isolated by Flexner monkeys. The virus has been secured from the central nervous system, the nasal discharges and the bowel discharges from affected patients. It has never been cultivated and little is known of its habits or nature.

Mode of Transmission.

I believe that I can safely say that not one single thing is positively known about the mode of transmission of poliomyelitis. A number of deductions have been made and theories advanced, each based on a more or less definite sequence of fact, but not in a single instance has it been proved. Certain facts stand out so prominently, however, that they are worth notice. It is frequent in crowded centers of population, and as it spreads from its original source it spreads in a manner similar to the ripples on a pond when a stone has been thrown into the water; that is, always toward a periphery; following, however, certain radii which are usually highways of travel.

There is serious doubt that an intermediate human host ever transmits the disease, although some weight is lent to this conception by the fact that the virus has been found in the nose of persons not affected, but who have been exposed to the disease, and those who have recovered.

A striking and almost startling fact is that it is exceedingly uncommon to find more than one case in a family, however large that family may be. The only way that we can account for this is the possibility of all the other members being immune. Some observers think that other cases do occur, but that they are of the non-paralytic or abortive type.

The transmission of the disease through the agency of insects or some of the lower animals has been discussed for a long time, and was supposed to have been settled in the negative. The theory still has its advocates and the analogy between the manner of spread of polio and plague is striking enough to merit further investigation of this theory.

Pathology.

There is a general edema of the cord, and a congestion of the brain and membranes. There is a perivascular infiltration of the tissues with large mono-neuclear leukocytes. This infiltration commences first as a single layer of cells and gradually increases concentrically until it is of sufficient amount to cause necrosis of the anterior horns of the cord. The symptomatology depends on the extent of the infection; that is, whether it is merely spinal or encephalic, with the consequent production of cerebral symptoms. The symptomatology, therefore, is not dependent on the involvement of the anterior horn of the cord alone. This can-

not be too strongly emphasized, especially in observing epidemics.

Spinal Fluid.

It is very important to take the spinal fluid, not only as an aid in diagnosis from the negative standpoint, but also because it presents a more or less definite picture in this disease. The fluid is usually increased in amount. It is sometimes under pressure, estimated at about one-fourth of the cases. During the first stage; that is the active febrile stage, lasting about thirty-six hours, we have a polymorphonuclear leukocytosis. During the second stage the picture changes, and the fluid contains about ninety per cent. large monocuclear cells. In a definite number of cases there are a few large cells which may be of endothilial origin which are considered by some to be characteristic. The spinal fluid reduces sugar. The albumin and globulin are present and there is usually a fibrin clot. "The cell count usually becomes normal towards the end of the second week, but the increase in albumin and globulin persists for some days longer." There are variations in this general rule.

Distribution of Paralysis.

The most common distribution of the paralysis is the tibialis anticus, usually with the peroneals. However, this is by no means the only distribution. We may have the rectus abdominus; the quadriceps femoris; the diaphragm; one or more pectorals; one or more deltoids; the interossii of the hands; the sternomastoid and even one or both sides of the face or the external muscles of the eye. So it may be seen that almost any group or single muscle may be involved. Of course, when the bulbar symptoms are apparent nuclear paralysis is the rule, and it is in these cases that we have the terminal involvement in the paralysis of respiration.

Method of Onset of Paralysis.

As a rule in the usual type of cases all of the paralysis that is going to take place occurs at one time, but this is by no means true of the exceptional or irregular case. There may be days of intrvention between the involvement of the muscles ,and, in fact, there may be a gradual involvement of all the muscles of the body, extending over four or five days.

Common Clinical Type.

The most common type of poliomyelitis gives a history about as follows:

The onset is with fever ranging from 101 to 103, marked irritability of the patient, pulse and respiration not characteristic of anything. The patient may or may not be sensative over the affected area. Constipation is the rule, diarrhea the exception. The patella reflex is uniformly absent before the onset of paralysis. This reflex occasionally persists, but never where the quadriceps on that side is paralyzed. Stiffness of the back or neck or sometimes both, are present. (This is the exception rather than the rule). The paralysis occurs in from twenty-four to forty-eight hours, and is flaccid. An occasional spastic case is noted in epidemics. Whether this ever occurs except in those cases giving cerebral symptoms I cannot state.

Abortive Type.

Authorities differ widely as to the occurrence o fthis type at all, but its existence is now pretty well admitted. These occur in the course of epidemics as a rule, and present either gastric or cerebral symptoms and the usual prodromata of polio. And yet when these symptoms are over no paralysis can be discovered.

It may well be asked how we can say these are abortive cases. The answer is, the spinal fluid shows the characteristics already described. . I might cite one case which occurred in my own practice several years ago. The prodromata were present and there was a general muscular weakness and inability to swallow and enunciate well. This case looked like it was about to go to a fatal issue and involve the medulla. Finally the symptomes ceased and the patient recovered, but has never been able to articulate distinctly since.

The Spinal Type.

This type is the most common met with, and gives the name to the disease. The general prodromata have been already described. Looking further into the case we may find that there may be no perceptable prodromata, or there may be a very slight malaise, a trifling indisposition or crossness. The child awakes the next morning and we discover it is paralyzed in one or more groups of muscles. On the other hand, we may have prodromata extending over several days at the onset, the paralysis developing sequentially group by group. All symptoms may pass away and the child be apparently perfectly well, and we think there has simply been a slight indisposition from some unknown cause, and after four or five days or a week we may find that the child is paralyzed.

Cerebral Type.

This type is the one which gives rise to most difficulty in diagnosis. It occurs whenever the involvement is distributed to the membranes of the brain, and may in consequence resemble the meningeal

symptoms occurring in the course of any febrile disorder. These manifestations may be so definite that it may be impossible to differentiate the case from some form of meningitis. In this type we are apt to have the usual signs of meningeal irritation; headache, vomiting, fever (usually high, sometimes low) neck rigidity; Brudzinsky, Kernig and Macewen; reflexes usually diminished. Active manifestations may end here or let up, to return again in a few days with renewed vigor. These symptoms may be pronounced or so slight as to escape notice. When the paralysis is apparent it may be marked as in former types, or, there may only be a slight facial involvement, or a unilateral occular or orbital with a strabismus, or perhaps a slight weakness of one of the upper extremities.

A characteristic triad of this type as described by Koplik gives us a strabismus, unilateral facial and one upper extremity (usually deltoid). It is frequently difficult or impossible to distinguish this type from certain cases of tubercular meningitis. In the latter, however ,the onset is usually gradua land paralysis is apt to be a terminal manifestation. Sometimes even lumber puncture fails to aid us here, the changes are so slight. Animal inoculation may help us, but at times, even this fails.

Bulbar Type.

In this type we may have a mild febrile or digestive disturbance. In twenty-four hours we find a slight or decided flatness on one side of the face. This is a common picture, but unfortunately we do not have only this. The first symptoms may be difficulty in swallowing or breathing, or both. Of course, in these cases the nuclei are involved. The patient dies from paralysis of respiration.

Prognosis.

The mortality varies from two to thirty per cent. in various epidemics; the death rate in the recent New York epidemic being twenty-six per cent. Death usually takes place within four or five days, occasionally about the tenth day. Generally speaking, when the patient has survived the tenth day we feel that the recovery is certain.

The prognosis as to the paralysis is variable. A large percentage of cases recover either rapidly or gradually, to an extent which makes their deformity eventually barely perceptible. On the other hand, one has merely to walk through the streets of any community and see the fearful results of this disease.

Where groups of muscles antagonize each other marked deformities occur, due to the non-affected muscles pulling against the weakened muscles.

Treatment.

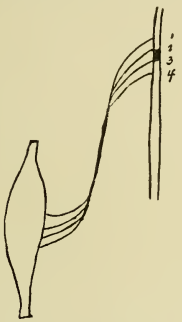
There is no specific treatment for poliomyelitis. The serum from those who have been affected has been tried with varying results as to success. During the acute stage of the disease absolute rest for from four to six weeks is essential. Muscles which bear the weight of the extremities should be immobilized and supported by slings, splints and similar devices. When one of opposing groups of muscles is affected, causing contractures by the well muscles pulling against the paralyzed ones, it is very necessary to enforce rest in the anatomical position. For example: in the lower extremities where the peroneals or tibialis anticus are affected the safest form of treatment is plaster cast. This is generally kept on for four weeks, then the anterior or upper part of the cast is cut away and the lower part used as a fracture box would be used. In extreme cases, even after the patient is up and about, it is well to put on the supporting apparatus during sleep.

Gentle massage is considered by some to be beneficial. I doubt its efficacy. And even if it is used it should be used with exceeding gentleness, and then, only by an expert. Otherwise, a more or less disastrous result may be produced. No manipulation or massage should be started during the acute stage, which is considered to last from four to six weeks.

I believe that the weight of authority feels that electricity has no beneficial results. The best way to re-establish function in the affected muscles is by voluntary motion. As soon, therefore, as the acute stage is over and all tenderness disappears, it is well to encourage the patient to use the affected muscles; gently at first, and then more or less freely.

In the majority of instances it is advisable to put on the supporting apparatus early, to prevent counteraction of opposing groups of muscles, thereby preventing deformities. The benefit to be derived from voluntary motion is best illustrated by the accompanying diagram. It will be seen in this diagram that the nerve plexus is formed by several roots emanating from the spinal cord. For example: One, two, three and four unite and form a trunk which eventually breaks up into small filaments as they are distributed to the muscles. The specific infection may only affect a part of the nerve roots supplying the trunk. For example: in the diagram roots number two and three leaving one and four unaffected. It will be seen by this that at least part of

the nerve supply to the muscles is left intact. It is impossible to determine how much of the cord is affected, therefore, we act on the assumption that at least a part is healthy and sends out normal stimuli to the muscles. Therefore, by exercising the muscles voluntarily we may secure a fair degree of motion through the affected nerves, thereby securing a more or less useful limb. This of course, is merely a diagramatic illustration.



Improvement should continue, when it takes place at all, from one to two and even more years. When deformities have resulted expert orthopedic treatment alone should be relied on.

Primary Suture and Union of Bladder Operation Wounds.—Thompson, in The London Medical Lancet, says that the technic for primary closure of bladder wounds, after removal of the disease for which the operation was performed, consists in control of all hemorrhage by filling the viscus with gauze sponges saturated with boric acid solution at 120 deg. F., removal of the sponges, and introduction of liquor hamamelidis at the same temperature. This is allowed to remain while a coude catheter is passed through the urethra. The wound is covered with cyanide gauze during this part of the procedure to prevent contamination. The tip of the catheter is placed about one-third up the vertical height of the bladder and marked at the meatus. The bladder wound is exposed, its ends secured by Lane's forceps, the edges slightly everted, and it is sutured with fine catgut placed through the muscle as close to the mucosa as possible. Each suture is tied as soon as passed, the ends being left long for traction until the opening is closed. The suture line is carefully palpated and holes are closed if found. Thicker catgut sutures are used to close the fibrous and outer muscular coats, inserted in Lembert's style. The space of Retzius is washed with boric acid and a gauze wick is inserted. The peritoneum is then replaced over the bladder and the abdomen is closed with two rows of catgut sutures, one superficial being placed below the gauze wick. Aftertreatment is begun at once by irrigating the bladder at slowly lengthening intervals with hot normal sodium citrate solution until the washings are permanently free from blood. This is usually on about the third day. Only four ounces of solution are run in at once and between irrigations the catheter is connected with a long drainage tube. Then boric acid replaces the citrate for irrigation and is continued for two or three days. The gauze wick is removed on the second day, the catheter at about the tenth day, and the sutures after two weeks. Spinal anesthesia is employed. Contraindications to renal insufficiency, difficulty in checking hemorrhage at the time of operation, and too severe damage to the bladder.

Infective Theory of Acute Leukemia.—Ward (British Jour. Children's Dis.) reviews 1457 cases of all varieties. Dr. Ward states "The theory that leukemia is due to infection seems to derive most support from the acuter cases. Such cases are not infreqeuntly admitted to fever hospitals, sometimes because of purpura and general symptoms, and sometimes owing to a definite membrane on the throat which closely resembles that of diphtheria." He admits that as yet no infective agent has been isolated. The cases on record of congenital leukemia gave no clue of any source of infection in the mother or elsewhere. As regards leukemic mothers there is nothing in the records to show that their offspring tend to be leukemic, or that the mothers of leukemic children are leukemic. Of this series there are several cases in which this condition was present in two or more individuals who were members of the same household, but these are shown to be merely coincidences. The doctor says that congenital acute leukemia is not infective, but that occasionally there is apparently infection of one person from another in older children and adults. He shows by charts that leukemia has a marked preference for the male sex; that chronic myelemia shows a majority of cases between 25 and 45; chronic lympremia between 45 and 60; acute leukemia shows a decided preference for ages below 25. He recapitulates as follows: "The evidence of the facts here

dealt wit his almost entirely against the infective nature of leukemia, the established facts being: (1) That there is a congenital form of leukemia, which occurs in children whose parents are not leukemic. (2) That leukemic parents have never been known to transmit the disease to the newborn child. (3) That instances in which actual infection of one person by another might seem to have occurred are very few, although not necessarily devoid of significance. (4) That in having a marked preference for a particular sex and age leukemia differs from the infective class of diseases, and resembles the metabolic diseases and cancer.

Venereal Diseases as We See Them Today.—McDonagh, in The London Practitioner, who long since suggested that the spirochaeta pallida is not the sole cause of syphilis, but only the adult male form of the leucocytozoon syphilidis, after quoting Harrison to the effect that this extraordinary work received no confirmation, reports that it has been repeated and confirmed by Peyri of Barcelona, and by Klausner of Prague.

The writer says with truth of the fact that the longer a view in medicine take to be accepted, the more correct it is, and vice versa. The writer published his work in German to prevent the Germans repeating the work and publishing it as their own discovery. One publisher wrote him saying the publication was impossible, for the work caused considerable annoyance to the professors of the city.

He criticizes the statistics of the Royal Commission on Venereal Diseases. He sums up his own view concerning the lessening of incidence of venereal diseases as follows: That nothing short of prevention is going to diminish the spread of venereal diseases. All we can do at present is to aid those infected, and strive to discover some preventive measures. Preventive measures are what we are in need of most, and such measures are most likely to come from men who are confining themselves to the study of venereal diseases, and combining pathological and clinical work. The best way to get such men is to make whole-time appointments, to be held by one or more men in every town which has a population of over, let us say roughly, 30,000 inhabitants. These venerial specialists would in no way be hampered, for the treatment, etc., in vogue at each town would be that which the specialist himself deemed the best. Every incentive should be given to the men appointed to do research work, the incentive being in the form of money promised, according to the practical value of the research work done. The best men would soon come to the fore, and they would be judged by the merit of the work they produced.

The Treatment of Liver Abscesses by Intrahepatic Injections of Emetine Following Aspiration.—Ghosh, in the Calcutta Medical Journal, says that there is one consideration worth remembering in the treatment of cases of liver abscess. It is the fact that all amebic abscesses, when they are of any size, require evacuation. He is not speaking of the very rare case of a smal labscess or a case of doubtful suppuration. Rogers recommends this plan, prior to hypodermic injections of emetine. Foreign observers, too—for instance, oJseph Smits, of Sumatra—write from a large experience of cases that "liver abscesses should be evacuated. They do not yield to emetine injections." He clearly means to say that emetine injections alone do not suffice. Well, if that be the general experience and consensus of opinion, and the aspirator has to be used, is it not best to throw in a quantity of emetine in more or less direct contact with the amebae at the same opportunity and cause no additional risk or trouble to the patient?—rather giving him a quicker cure. There would, indeed, then be a more or less direct kind of treatment against the amebae in their most vulnerable form. Besides, a much stronger solution than that which is possible by hypodermic method can thus be brought into contact with the amebae, while no toxic symptoms are to be feared even, in spite of big doses like a grain and a half at once, as shown in two cases of the writer's, and especially in a boy who was only fifteen years old. He trusts that by using initially a still bigger dose, 2 grains or so, we can curtail the number of subsequent injections and the total expenditure of the drug. It appears then that on theoretical grounds, and on grounds of practically achieved results, the merit of this plan of treatment seems beyond question. And the doctor says that the achieved results certainly justify the adoption of this plan of treatment in all cases of amebic abscess of the liver.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

AID MEMBERS WHO GO TO WAR.

The Edgecombe County Medical Society has adopted a plan of service by the physicians who remain at home to take care of the patients of those who volunteer in the medical corps, turning over to the dependent families of the absent physicians 25 per cent. of all medical fees and 50 per cent. of all surgical or hospital fees collected from such patients.

Dr. John M. Baker, of Tarboro, has written to Dr. Charles O'H. Laughinghouse, of Greenville, ex-officio President of the Medical Society of North Carolina, asking that the State body take some action in the atter.

"Our county society," said Dr. Baker, "has already taken action. The eligible members agreed to offer services to the government and those ineligible agreed to look after the patients at home just as far as practicable, turning over to the dependent families of the absent physicians 25 per cent. of all medical fees collected and 50 per cent. of all surgical fees, holding, as far as practicable, his practice intact and turning it over to him on his return from the war.

"Of course, this will strike you as somewhat idealistic and in many respects impracticable, all of which is admitted, but it seems that it would be of some service and at the same time be a manifestation o fthat esprit-de-corps for which the profession is noted and let those who feel that those less fortunate, who are compelled to remain, are not taking advantage of their absence to rob them of their practice."

Pledging his co-operation, Dr. Laughinghouse replied: "Your plan of service by the profession in the way of assisting those who go to the front in maintaining their families and in keeping their practice to a certain extent corralled until their return, is not idealism; it is common justice, and to do less will weaken the tone of the profession and besmirch the career of those members of it who, for one reason or another, remain at home while the others go to the front."

QUARANTINE LAW EFFECTIVE.

The new State law for the control of contagious diseases, which became operative in North Carolina August 1, will for probably a month yet be administered with a part of the county machinery not in motion.

Because of the fact that quarantine officers provided for in the law have not been named in a number of counties, and because of the monthly scale o fsalaries provided for the service, these counties must necessarily be held back until Spetember. The State Board of Health has sent out requests to such counties that all communicable diseases included in the list of those which come under the provisions of the law, be reported directly to the board by the physicians. This, however, refers only to those counties in which county quarantine officers have not yet been appointed.

The diseases which they are to report include Whooping Cough, Scarlet Fever, Typhoid Fever, Bubonic Plague, Measles, Smallpox, Typhus Fever, Yellow Fever, Diphtheria, Infantile Paralysis, Asiatic Cholera, and Cerebro-Spinal Meningitis. All reports should be made to the State Epidemiologist, Raleigh, N. C.

The board realizes that it must depend a great deal upon the co-operation of the physicians of the State in making this law effective. In a letter that has just been mailed to the physicians, Dr. W. S. Rankin ,Secretary of the Board, says:

"The North Carolina State Board of Health takes this occasion to again acknowledge its sincerest appreciation for the sympathetic interest and co-operation of the physicians of North Carolina in the enforcement of the State's health laws, and on the past record of the profession, we look with full confidence to yet greater co-operative achievements by the State and profession."

THE CLINICAL THERMOMETER.

Medical men as a whole should realize more than they do at present the extraordinary usefulness of the clinical thermometer. It is of well nigh sovereign value as an aid in diagnosis, prognosis and treatment. To neglect its use is to neglect the patient oft-times. By a mere summing up of the patient's own sensory phenomena in association with clinical thermometric readings at regular two-hour intervals more can be gotten in a diagnostic and prognostic way in tubercle, for instance, than many other diag-

nostic tests combined. The personal element in erring by auscultation is very great in spite of what we are led to believe and the same may with perfect truthfulness be said of percussion. To regulate on both sides the power of percussive stroke, the degree of pressure of the immobile finger, and the power of audition in alternating examination is often impossible except the lesion be very gross. One great benefit which the great dissenter, Hahnemann did, was to treat the patient and not the disease and that treatment was based on the totality of symptoms. Temperature changes bear such close connection with the state of the nervous system, with the powers of digestability, with resorptive toxic conditions and with the individual's relation to his climatic environment that it surely behooves us to pay more strict attention to our thermal readings in close association with both objective and subjective phenomena, especially the latter.

The reason for superior results in hospital practice is often to be solely found in the care taken along the above lines, provided the medical attendant is qualified to pass judgment upon what is elicited. However, it is to the general practitioner, that most real research of value is to be obtained as he is who is most able to see through all the consenual attributes of the illness at hand. The life of the general practitioner is fraught with more dangers and pitfalls and demands a huge expenditure of self reliance but the feeling of powerful usefulness is greatly inhanced in his life work.

MACFARLAN.

THE YOUNG DOCTORS AND THE CALL OF THE NATION.

Certainly of the numerous calls being now made upon the younger men of the profession for enrollment in the medical service of the nation, there has been none called to our attention more forceful and direct than the following letter from Dr. Richard Derby Major M. R. C. U. S. A., published in a recent issue of the New York Times. It will bear repetition until every young member of our profession has heard his country's call and evidenced his willingness to respond to the summons to duty. J. H. W.

"It is incomprehensible how any virile young American doctor, who has completed his medical school and hospital training, is not married, and has no dependents, can fail at thi stime to appreciate the need in which our government stands for his service. And yet the age class that I have described has but few representatives at the three Medical Officers' Training Camps now in session in the country. The average age of doctors here at Fort Oglethorpe is just under 40, and from what I hear from Fort Riley and Fort Benjamin Harrison this average is maintained in those two places.

"Where are the younger men?" is the question asked on all sides. And in the present crisis it is an ugly question and cannot be answered without throwing discredit upon the younger men as a class.

It is high time for those of the younger men who are holding out as alternates to base hospital units to realize that their place is not with such units, and that furthermore the government, in spite of its inclination to make use of these alternates, will not in the stress of war change horses in the middle of the stream, unless illness on the part of the base hospital personnel makes such change necessary. The war has amply shown that the work in base hospitals can be effectively, and in my opinion, better, done by men over 45, thus releasing the younger men for field service work, for which they are so much needed.

The younger men should know that they cannot enter upon the duties of field service work with their professional training only as stock in trade. Careful training in tactics, sanitation and administration are a foundation without which they cannot hold down the lowest rank the government offers. Ask the men who have been at Fort Riley or Fort Benjamin Harrison since the first of June.

We have been at war with eGrmany for a period of four months, and the present indications point to this war lasting for as many years more. Will you younger men make it necessary for the Government to draft you into the service? What reason will you some day give to your children for not having answered the call of your country in its hour of need?

RICHARD DERBY,
Major M. R. C., U. S. A.
Medical Officers' Training Corps, Fort Oglethorpe, Ga., July 31, 1917.

SYMPATHY.

It is a grateful quality in any one to to have a sympathetic heart; but in no one is it more appreciated than when it is manifested in the doctor! 'Tis true, that sympathy never has a harder task, than when in suffering, and pain, in a case he is powerless to alleviate.

Sympathy is a balm to the wounded spirit. It is oil on the troubled soul. It

helps to bind up a broken heart. It's akin to consolation, and is better than pity. Pity offers no solace; but sympathy reaches the heart, and helps to assauge grief. It helps to carry a part of the burden. A touch of sympathy takes away some of the pain of suffering.

The poor, dumb beast crawls away, and dies alone; but man, at the dying hour, has a softer couch, and a sweeter close, if he is ministered to by tender and sympathizing hands.

There are deeper needs in the human soul than the possession of mere material things. Such things are a stay in times of health and strength; but they give no prop in times of fatal weakness; and speak no word of hope, or consolation, in the dying hour! Worldly possessions are only of avail in life; but the peace and hope, in the end, are the only comforts the soul can lean upon at last.

It becomes a doctor to be tender, gentle, and sympathetic. Stay by the dying patient till death closes the scene. If you can't smoothe dying pillows, you can, at least, minister to the living! F.

THE DRAFTING OF MEDICAL AND DIVINITY STUDENTS.

It would probably be impossible to formulate any rules or regulations for the raising of an army of soldiers or for exempting certain classes or persons from draft that would be entirely satisfactory to every one or possibly to even the greater number of our citizens. On such matters each one is likely to have ideas of his own, especially if the methods to be put in vogue hit somewhere near his own door step. But no one can deny that the rules laid down by President Wilson, as given in the press reports, are upon the whole very fair and just and beyond serious criticism. Yet it does seem a little difficult to understand why he should exempt divinity students from draft and not medical students. But it may be possible that there will be some explanations bearing upon this matter later or some modification of the rules which will change them materially.

If the war lasts two or three years longer, as it seems likely now to do, there will be great need for young, able bodied, well trained doctors. The supply by that time will be much depleted. A competent army surgeon, such as the government wants, can not be educated and made fit for duty in less than four or five years, even from our brightest young men with high school or college preliminaries. But the drafting regulations now stand a student, even with three or four years start upon his medical course of study, may be drafted into one of the other branches of the army and so be forced to relinquish his medical aspirations.

Certainly our Surgeon General will not want his available surgeons needlessly cut short two or three years hence and he should take measures to encourage and build up a supply for future need. Let him bring the matter to the President's attention for re-consideration. Divinity students should be exempt only as the conscientious scruples of their individual creeds are abhorrent to war and not through any sentimental considerations. We are engaged in serious business and need to figure upon the future and necessary requirements of our armies and of the country in the same methodical way our far-sighted enemies do upon their economic necessities. C. K.

THE DOCTOR AS A TEACHER.

The doctor has long borne the burden of the physical care of the world; willingly it is true; yet when we think of it in a reasonable light, more with the air of a martyr than is exactly complimentary either to himself or to the layman.

We have heard much of efficiency of late—have taught it in our colleges and our hospitals; we have flattered ourselves that we practice it, but—do we? Do we not do our best to shelter the ignorance of the public, and teach them to lean upon us more and more; are not all of our ministrations clouded in mystery to the average mind. Naturally, the physician with his knowledge gained by long and arduous training, cannot be expected to make clear to his patients his reasons for his diagnosis and his treatments; however, there are many comparatively simple things in which the layman might aid.

For years a favorite copy-book exercise has been, "Cleanliness is next to Godliness," and the majority of the country has its strongest opponents in sunlight, pure air, and simple nourishing food—that typhoid is scattered by the neglect of common physical cleanliness—that the power of nearly every people have believed they lived the axiom. Thousands of people still consider the daily bath, clean linen and mouth-cleansing a luxury instead of a necessity; think the extermination of the fly (very important, indeed) the first consideration, instead of the elimination of his breeding places; and assidiously close the windows at night.

There has been much propaganda for reform in the past few years among the

school children in this direction; this is a very good thing but the parent must be reached—and convinced; for his word is household law. And we all know how much harder it is to convince an opinionated grown person than a little child. It is because the things we would preach are so simple, whereas the newspaper quack appeals to his vanity by his obscurely worded technical phrases.

When we make them realize that tuberculosis—the dread disease so sadly familiar to the greater part of our country—has its strongest opponents in sunlight, pure air, and simple nourishing food—that typhoid is scattered by the neglect of common physical cleanliness, that the power of nearly every communicable disease would be lessened if our physical resistance were only higher—when we accomplish this and teach them the best ways to improve themselves—then will we really have accomplished good.

The appalling record of venereal diseases might be wonderfully changed if the whole noisome affair were rid of its shelter of darkness—nearly every case is contracted in extreme youth—the leading temptation of the primal cause being its mystery; not only the young child and the parent must be taught, but that most delicate creature of all—the adolescent.

The mystery of it tempts him, and the punishment terrifies him into silence, and leads him to that fatal step by reason of his cloak of secrecy), the newspaper quack.

Are we not indirectly responsible for these ills? Can we truthfully congratulate ourselves on our achievements, when we merely allay the suffering we might have prevented? No matter what we have accomplished in the past there yet remains much for us to do.

GEWIN.

INCURABLES.

Many diseases are still in the category of the incurables. We hear of cancer cures; tuberculosis cures; Bright's disease cures; Addison's disease cures; Hodgkin's disease cures; Morvand's disease cures, etc., etc.; but they don't cure them! The truth of the matter is such diseases are not treated any more successfully now than they were a half century ago. True, they are better understood, and more relief, with greater prolongation of life, has resulted; but no final recovery results. We see the mortality from such diseases on every hand. It doesn't make any difference what claims are made, the patients die, nevertheless. A man spent $2,000 with specialists, treating him for Hodgkin's disease; but he died just the same.

F.

ALCOHOL AND THE AMERICAN MEDICAL ASSOCIATION IN 1917.

At the recent session of the A. M. A. in New York the Council on Public Health and Medical Education at the instance of one of its strong and forceful members, the well known Secretary of a Southern State Board of Health, passed the following resolution:

"It is the unanimous sense of the council that alcohol is wholly without drug value either as a tonic or stimulant or in any other therapeutic way; that it has no value in the treatment of disease; that its only permissible use in medicine is as a preservative or in the preparation of pharmaceutical products."

This interesting and vigorous pronunciamento on a much controverted topic was then transmitted to the House of Delegates of the A. M. A. where after vigorous discussion the following was adopted as the official expression of the American Medical Association, 1917, session in New York, relative to this important matter:

"Whereas we believe that the use of alcohol is detrimental to the human economy, and whereas its use in therapeutics as a tonic or a stimulant or for food has no scientific value, therefore be it resolved that the American Medical Association is opposed to the use of alcohol as a beverage, and be it further resolved that the use of alcohol as a therapeutic agent should be discourged."

The initial resolution passed by the Council composed of gentlemen either inactive in the practice of medicine, or wholly engaged in other forms of professional activity did not in its passage encounter the determined opposition met with in the House of delegates composed for the greater part of medical and surgical activity in practice. In the latter body the Council resolution was the subject of prolonged debate, frequent amending motions being offered, and a strong disposition manifest to prevent the adoption of so radical a pronouncement as the Council had offered. Ultimately appeals for the profession to assume a position of strong leadership in the matter, coupled with the frequently asserted conviction that the United States government would, following European example, at least greatly restrict if not prohibit the use of alcoholics during the war, had

their influence in softening the pronounced opposition of a very large percentage of the members of the House of Delegates who believed in temperance and practiced it, but who also felt there was and is a perfectly proper and legitimate therapeutic field for the exhibition of alcohol as well as for the numerous other of hurtful and habit forming drugs.

W.

A RESUME OF RADIUM.

There is no doubt that the reputation and knowledge of radium has not as yet reached its height; indeed to many of our profession its value is almost as unknown as it is to the majority of laymen. Even the men most familiar with its use realize that the uses to which it may be applied are by no means exhausted; and many of our best men are devoting their lives to its development.

We would not trust modern surgery to a medical practitioner—neither would we trust the application to an expert surgeon unless he had also devoted himself to the study of radium-therapy.

It is true it is used in malignant diseases as well as some of benign origin—yet its value in each of these cases varies —and can ony be determined by an expert; also the treatment is gauged by the varying circumstances.

Radium has suffered much unjust condemnation; also it has received much exaggerated praise—so with the majority it is believed to be either an utter failure or an infallible cure. It is neither, rightly applied it is capable, of accomplishing much good and in selected cases, cures; in others, the benefits received are slight.

Its affect upon malignant conditions depends upon the variety of growth, the location, its duration and its predisposition to metastasis. Under favorable conditions it may affect a cure—in others it may be possible only to alleviate pain.

Very good results are obtained in almost all epitheliomas; such conditions result in cures unless certain unfavorable complications are present.

It has been estimated that at least 40 per cent. of all women suffer from some form of uterine tumor, with its accompanying menorrhagia and metrorrhagia. In the majority of these cases radium produces a perfect result. Surely if it were worthy of no other praise, this commendation would assure of position in our dependable remedies.

Then too, in menorrhagia and metrorrhagia of young girls it is of great value, as the dosage may be regulated; it is possible, if correctly used to restore the functions of the generative organs to normal, leaving in all almost all cases no ill effects for future worries.

Other important uses might be mentioned, however, those mentioned have been proven and accepted. We realize that we are as yet imperfectly acquainted with the many valuable uses to which radium will be given in the future; yet even with our present imperfect knowledge of its great worth, we give it permanent place with our accepted aids to human health.

GEWIN.

MENTAL ILLS.

"Canst thou not minister to a mind diseased; pluck from the memory a rooted sorrow; raze out the written troubles of the brain, and with some sweet oblivious antidotem cleanse the stuffed bosom of that perilous stuff that weighs upon the heart??"

Mental disease are the most difficult of all ills to successfully treat. The "melancholia" type will frequently end in suicide. Maniacs do not, but the lives of others are endangered by them. There are so many different types and degrees of mental alienation, that the only means of treatment with any prospect of cure can only be found in sanitariums where such cases of aberation are treated with some good results.

The nostalgia of the army is a sort of melancholia! I saw a boat-load of such nostalgics furloughed from Shiloh. They were granted three months furlough, to see the home-folks. The nostalgics were farmer boys, as a rule. The writer heard General Smith say: "I have a regiment without a hospital record. I recruited it from the slums of St. Louis; hard nuts who roughed it, day and night. They virtually have no home ties. Army life is a picnic to them." The home-sick men were useless to the army. Some of them were so melancholic that they would rush into the very jaws of death, preferring death to homesickness. Such cases were mental diseases, of functional type.

When it comes to brainy men becoming insane, there is very little hope of restoration to a normal state. Brains overtaxed with busines scares; lack of brain rest and mental tranquility, will overthrow the throne of reason, and leave one a mental wreck. The gray matter breaks down.

F.

HINDRANCES.

Lack of studiousness is one of the reasons many medical men lag behind in the march of progress.

Laziness is another. Love of sport and pleasure, rather than application to the acquisition of knowledge.

What of scrutiny and experience.

If a physician gets the baseball mania, he will lose business.

The people keep an eye on the doctor, and take note of his habits. If he is seen entering a "saloon" there are many persons who would not employ him, under any circumstances! There may have been a time when a dram-drinking doctor would be excused, but sentiment today will not tolerate it! Being almost any place but in his office will hurt him. If he keeps his office well, it will keep him.

Slipshod methods will ultimately lose him clients. Contracting debts he sees very little prospect of paying, will injure his reputation. He should pay as he goes, if possible; but if not able to do so, be prompt to settle your bills. Be a business-like man; and have a system to render accounts monthly. If they get old they will not be colectable.

Keep posted by reading medical journals, which record advanced thought and practical experience.

Don't tell the ills of your patients from one bedside to another. The sick don't wish their ailments "bandied" about from house to house. A physician should be very discreet, and rather close-mouthed. Many doctors are inclned to be garulous, and put their foot in it, much to the disgust of their patients. Such men can't hold patients! Be quiet, agreeable, and reasonably dignified. Do so, and you will win.

DEXTRALITY—IS IT DESIRABLE?

The subject of right handedness has so long been discussed that it seems stale and unprofitable, since, by common consent, dextrality is conceded to be most desirable.

Of late a new element has been introduced and the question may, perhaps with interest, certainly with advantage if the new predicates are correctly affirmed, be revived.

That right handedness has the merit of great antiquity is a point in its favor. Modern investigations in anthropology make it certain that dextrality has prevailed during long ages of the past. Would it not have been abandoned had the experience of time shown that it is unprofitable?

Yet the facts upon which we base our assurance that the inhabitants of Central and Southern Europe twenty-five or more thousand years ago were a right handed peopel are the facts that show that they were a people, like those of the present day, whose crania were deformed.

The asymetry of the skull of the men of the Stone Age manifested itself, as it does at the present time, by a more rapid and a greater development of the left side of the cranium than of the right.

Such a cranial development is the result of the greater use of the right side of the body during the process of growth and must carry with it certain disadvantages.

Among others and perhaps principally among them, it induces an obliquity of the vertical axis of the orbit of the side which is most largely developed and this orbital obliquity carries with it an obliquity of the vertical axis of the eye.

The organ which suffers the displacement is usually the left since with right handedness the left lobe of the cerebrum is developed to a greater extent than its fellow. The eye ball in this left orbit is, as a result, dislocated in proportion as the orbit is tilted.

The obliquity of position of the left eye ball demands form the adjusting apparatus within the orbit more or less excessive efforts to place the eye in more exact relations to its fellow. To these efforts are due, principally, the anomalous conditions known as heterophoria. Such irregular efforts will depend largely upon the degree of physical difficulty interposed to the adjustments.

That many forms of nervous disturbance including some which are annoying and others which are of infinite consequence may and do result from these efforts at eye adjustments demanded in many of these cases of oblique directions of the axes of the eyes is a natural result. And it follows that this development of one side of the cerebrum more fully than the other is not an advantageous but decidedly a disadvantageous development.

It is not in every case that the left side of the cerebrum is most developed, for various reasons, but the fact is far too general.

Is it then wise to train children to develop one side of the body in excess of the other? Should not the physical form be developed in symetry and with harmonious action? It would appear that the young should be carefully instructed in the use of the hands equally. Children

should not be permitted to become left handed which is even worse than being right handed but they should be taught an equal use of the two hands. This will insure a more symmetrical development of brain and of the carnium and with these other important physical advantages may be expected. C. T. S.

NECESSARY TO SUCCESS.

Whatever your profession, avocation or pursuit, a prerequisite to success is ambition and a determination to master everything pertaining to the line you are to follow.

Don't be satisfied with mediocrity—the world is full of mediocre doctors, lawyers, pedagogues and preachers!

There is no success without hard labor. The great men of the medical profession have been students—constantly seeking greater skill to combat disease.

Celsus, Galen, Boorhave, Virchow and our own Dr. Rush, were students, investigators and authors, in the science and practice of medicine.

What the world needs today is MEN! Men of plain, practical sense, who are devoted to the noblest aim in life—alleviation of human suffering.

There is no higher calling. While the physician practices for pecuniary rewards, he yet is inspired by philanthropy and benevolence.

There is no loftier mission. None which so closely assimilates the human with the Divine. Whether the physician accumulates wealth or not, his is the glorious task of going about doing good.

It is an indication of success if it can be said of anyone "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me."

The surest way to make the practice of medicine a success is to make it scientific.—And as I have already said, make it a philanthropic success! F.

DOCTORS AND THEIR FEES.

It is said that the late Samuel J. Tilden's physician received $143,000 for seven years' services. In 1887 the sum of $14,800 was paid for a post-mortem over the body of Vice-President Wheeler. Jay Gould paid his physician a regular salary of $15,000 whether sick or well. President Garfield's physicians got $27,500 for attending him when he was shot. A Standard Oil magnate paid a physician $100,000 for attendance upon his daughter extending over a period of two months. The late Dr. Pepper once received $10,000 for one visit. Wm. C. Whitney gave his physician $25,000 for one week's attendance.

We have several other such statistics, but enough said, for "comparisons are odious." The men who received these big fees, it should be remembered, were not only skilled physicians but men who would have played the game of high finance pretty well had they chosen other lines. The average physician makes less than $1,000 per year, less than that of skilled and artisan laborers.

GET YOUR CONSUMPTIVE EARLY.

All are agreed that the hope of arresting tuberculosis and effecting a cure depends upon early diagnosis. The early diagnosis is not easy; so many other things simulate incipient tuberculosis. After the disease is thoroughly intrenched the diagnosis is mere piffle. Jones' neighbor knows that Jones has it; Jones knows it himself, but in nine cases out of ten will not admit it. Some one has said that the only safe procedure is to consider as tuberculosis all cases of fatigue and debility that can not otherwise be accounted for. Every protracted case of neurasthenia should be looked upon with suspicion. The early symptoms that are really worth while are gradual loss of strength and weight, indifferent appetite, fatigue after slight exertion, hacking cough, and an early-morning subnormal temperature. In cases of cough and expectoration, chills, night sweats, etc., the diagnosis is usually unmistakable, although the latter symptoms can exist without tuberculosis. A grip infection can, in fact, have all the earmarks of tuberculosis. Convalescence from many disease, especially pneumonia, may look like the well known T. B. The skin tests for tuberculosis have a measure of value but are usually confusing and of little value to the general practitioner.

Get your consumptive early if possible. Do not promise an immediate diagnosis. It may require weeks or months. But by a careful study of all the symptoms a reasonably sure conclusion may be reached in a very short time. If in doubt it is better to err on the side of the patient by diagnosing probable tuberculosis and putting him in the best way to recover. What is the treatment? REST is the most important of all. NOURISHment comes next. AIR comes next, although it is probable that the value of air has been exaggerated. The psychic element should not be omitted. The patient should have a cheerful environment and must be impressed with the fact that he is going to get well, provided he does his part.

EDITORIAL NEWS ITEMS

The Henderson, N. C., Hospital Unit with 33 men has been organized by Dr. E. F. Fenner and their service tendered the U. S. authorities.

Dr. H. T. Parker, of Norfolk, Va., has been appointed Bacteriologist and Chemist of the local board of health, by the health department of that city.

Dr. Claiborne Wilcox, of Norfolk, Va., has been appointed medical assistant in the local health department by the Norfolk Department.

Dr. Tom A. Williams, Washington, D. C., has gone to France where he will occupy a responsible position as Consulting Neurologist in the service of the armies of the allies.

Dr. William J. Montfort of Swansboro, N. C., a graduate of Jefferson Medical College of Philadelphia in 1859, died at his home on March 31, aged 77 years.

Dr. Archibald E. Baker, the well known surgeon of Charleston, S. C., has returned to his work after an outing of a few weeks spent in Rochester, Minn., at the Mayo Clinic.

Dr. Tom A. Williams, of Washington City, is in France connected with the Medical Department of the United Armies.

All information that he might be interested in, should be addressed to Dr. E. G. Mitchell, 15 Seventh street, N. E., Washington, D. C.

Dr. F. M. Register, for fifteen years past the capable medical director of the North Carolina State Prison Farms, has resigned and accepted service with the Bureau of county health work established by the North Carolina State Board of Health. Northampton County will be carefully worked by Dr. Register.

Dr. F. R. Harris, Henderson, N. C., of the N. C. State Board of Health, left the end week of July in a Ford automobile to cross the continent from Batlimore via Pittsburg, Pa., to California accompanied by his son. The doctor will make the trip leisurely and will doubtless besides seeing the real country as it is, have some interesting experiences.

Dr. Livius Lankford, Norfolk, Va., a well known physician, and an ardent advocate of "medical preparedness" dropped dead while drilling with his company of home guards in his home city June 19, 1917. Dr. Lankford was 64 years of age, and widely known as a leader of the tidewater profession. A son, Dr. Livius Lankford, Jr., is now with the American forces in France.

Dr. H. M. Boswell, superintendent State Sanitarium for Tuberculosis, State of Mississippi, has been spending some days at the North Carolina State Sanitarium studying the North Carolina methods of management related to the tuberculosis work.

Dr. H. Lee Large, Richmond, Va., has been appointed health officer for Rocky Mount, N. C., succeeding Dr. J. C. Braswell, Jr., who accepts work with the Rockefeller Sanitary Commission going to Wilson County, N. C., for extended duties.

Dr. Robert C. Bryan, Richmond, Va., has gone abroad as a member of the Special Relief Commission to Servia and Roumania. The commission carries with it a complete unit of surgeons and nurses for service in the foreign war field. Dr. Bryan it will be recalled did splendid service on the Western battle front in the summer of 1916.

Gov. Thomas W. Bickett has appointed the following well known North Carolina physicians members of the Committee on Health and Sanitation for the North Carolina Council of Defense: Dr. W. S. Rankin, Chairman, Dr. Charles O'H. Laughinghouse, Dr. J. Howell Way, Dr. Richard H. Lewis, Dr. John W. Long, Dr. Isaac W. Faison, Dr. H. A. Royster.

The Fifth District Medical Association of South Carolina, met at St. George, July 11th. The meeting was largely attended.

Walterboro was selected for the next meeting.

The visiting physicians were invited by the local profession to dine at the Utsey Hotel. The occasion was especially pleasant.

Dr. T. J. Summey, Brevard, N. C., was the guest of honor at a banquet recently by the citizens of Transylvania County, N. C., prior to his leaving for the Federal training camp at Ft. Oglethorpe, Ga., where he enters the U. S. Army. A number of speeches expressive of the appreciation of the citizens for Dr. Summey

were made and he was also presented with a watch.

Dr. Stuart McGuire, Richmond, and the South's famous surgeon, has been granted authority by Surgeon General Gorgas to organize as rapidly as possible for special service on the French battle front as base hospital unit of surpassingly large size. The unit will be known as the Medical College of Virginia Hospital Unit, and will be composed of 60 surgeons, 150 nurses and 150 additional enlisted men, and will be ready for service in the foreign field in a few weeks.

Dr. D. R. Austin, son of Dr. J. A. Austin, of Charlotte, N. C., having completed his medical education has located in this city and will be associated with his brother, Dr. Fred D. Austin in the practice of medicine. Dr. Austin is a graduate of Jefferson Medical College, Philadelphia, having finished his work there last June, making a fine record in the medical college.

The Scotland County Medical Society of North Carolina, held an interesting meeting recently in the offices of Dr. Peter McLean of Laurinburg. A splendid attendance of the physicians of the county marked this meeting and a number of fine papers were read and discussed. The next meeting will be held in Laurinburg the second Monday in August.

Dr. William Seaman Bainbridge, of New York City, was recently commissioned Lieutenant Commander, with the full rank of Surgeon. This is the highest commission the law allows at this time in the reserve force. Five or six men were picked from various parts of the country for examination, and Dr. Bainbridge was the successful surgeon. This is a high compliment that his friends in the South appreciate very much.

Hon. Fred. C. Harper, a well known attorney of Lynchburg, Va., a former resident of North Carolina, and a brother of the late Wilmington, N. C., physician, Dr. Charles T. Harper, was recently elected Grand Exalted Ruler of the national organization of Elks. A well merited compliment to an accomplished gentleman, a forceful speaker, and a man whose heart is ever actuated with kindly impulse to his fellows in every sphere of life.

The State of North Carolina was divided into two districts by the Federal Government for the hearing of appeals from the local county exemption boards from persons drafted into the army, the Eastern District with headquarters at Raleigh, and the Western at Statesville. Dr. Charles O'H. Laughinghouse, Greenville, N. C., and Dr. John W. Long, Greensboro, N. C., each holding commissions as Major in the U. S. A. Medical Reserves, were designated by Gov. Thos. W. Bickett at medical adviser for their respective district boards.

The regular meeting of the Newberry County Medical Society, of South Carolina, met in the court house July 13.

Dr. Pinson read a good paper at this meeting.

Dr. Guerry, chairman of committee on Mobilization of Medical Forces of the State, met with the society and suggested plans for bringing the society in line with other societies of the State medical mobilization. Practically all the physicians were present. John B. Setzler is secretary of this society.

Dr. W. C. Kluttz, City Health Officer, of El Paso, Texas, died recently. He was only 39 years old. He graduated from the University of North Carolina, in 1895, and received his doctor's degree from the University of Pennsylvania in 1899. He was for two years in Blockley Hospital, Philadelphia, and later did postgraduate work in Germany and other European cities.

Dr. Kluttz was an earnest hard working student of medicine, a judicious and painstaking physician. He was a skilled physician of sterling worth. He had the respect and admiration of all who knew him or came in contact with him.

Dr. James S. Mitchner has been appointed health officer of Lenoir County, N. C., under the newer plan of public health work in this most active state which comprises a three-year co-operation between the county and the State Board of Health for certain specific purposes. Ten Carolina counties have offered for this work and to date five have been accepted, Wilson, Nash, Northampton, Davidson and Lenoir. The city of Kinston and Lenoir County will have under the arrangement a joint health department under Dr. Mitchener's direction.

The Lexington County Medical Association of South Carolina, met at Swansea, in the offices of the Drs. Brooker on July 6th. A large number of physicians were present and an interesting meeting

was held. Some papers of value were presented and freely discussed. Several physicians outside of the county were present and participated in the discussion. One of the papers presented was entitled "Abuse of Alcohol." They did not consider its use necessary in the practice of medicine.

After the meeting the local physicians entertained the members.

The next meeting will be held in Leesville next October.

Dr. James L. Orr, of Greenville, S. C., a prominent physician of that place, has been appointed by Governor Manning as first lieutenant in the medical corps of the Second Infantry Regiment, South Carolina National Guard. Lieutenant Orr is assigned to field hospital No. 1.

Dr. Orr was one of the organizers of the Greenvile ambulance company and his appointment in the National Guard will naturally cancel his affiliation with the ambulance company, which has been awaiting orders for several months.

The Third District Medical Society of North Carolina, held a clinic in the Tankersley-Harper Sanitarium, in Wilmington on July 18th.

The following is a partial list of cases operated on and discussed:

Adenoids and Tonsils.

Fract. of Epiphysis of Humerus.

D. & C. Shortening of Ligaments, appendectomy.

Gastro-enterostomy (Ulcer of Stomach).

Exploratory Laparotomy. Diagnosis Undetermined.

Demonstration of "Acidosis" and Method of Determining Quantity in the Blood—Dr. Houston Moore.

Demonstration Carrel-Dakin Method of Treating Infected Wounds.—Dr. Geo. Bowdoin.

Dr. Tankersley was master of the ceremonies. He was assisted by Drs. H. Moore, Bowdoin and Croom.

The Fifteenth Semi-Annual Meeting of the Second District Medical Association of South Carolina was held in Bamberg, July 18, and proved to be one of the best attended and most interesting sessions ever held. The following are the officers of the association: Dr. J. L. Copeland, of Elkhart, president; Dr. W. R. Lowman, of Orangeburg, vice president; Dr. Vance W. Brabham, of Orangeburg, secretary; Dr. J. S. Matthews, of Denmark, counsellor, Second district.

The meeting was called to order by the president and there was an invocation by the Rev. E. O. Watson, an address of welcome by the Hon. C. W. Rentz, mayor of Bamberg, and response by Dr. W. R. Lowman.

President Copeland's address was followed by a scientific session, during which Dr. A. E. Baker, of Charleston, discussed "A Recent Visit to the Mayo Clinics." Dr. LeGrand Guerry, of Columbia, read a paper on "Grove's Disease," and Dr. J. J. Cleckley, of Bamberg, talked on "Typhoid Perforations."

The local doctors and their guests went to the Edisto river to partake of one of the fish fries this community is famous for. After the feast, Dr. E. O. Watson, toastmaster, called on a number of the doctors, who responded in happy vein. Later the visitors left for their respective homes, after a day of profit and pleasure.

Dr. Stuart McGuire, the eminent surgeon of Richmond, Va., took up his duties in the War Department July 22 as a member of the staff of Surgeon-General Gorgas with the rank of major.

Dr. McGuire succeeds Dr. William J. Mayo, of Rochester, Minn., as director of the surgical division of the medical department and will remain upon active duty in Washington for two weeks, when he will return to Richmond to organize a base hospital unit for service in France.

Authority was given Dr. McGuire to organize this unit in Richmond, with the Medical College of Virginia as the parent institution. It originally had been intended that the Memorial Hospital should be the center around which the unit should form, but at the suggestion of Dr. McGuire the Medical College was substituted.

The units will be organized along the same lines as that sent to France by John Hopkins Hospital, Baltimore; Columbia University Hospital, New York; Harvard University Hospital, Boston; Roosevelt Hospital, New York, which was headed by Dr. James I. Russell, of Winchester, and others throughout the country.

Dr. McQuire says that the unit would have charge of 1,000 beds and would require a group of 360 men and women to man it.

Probably 60 surgeons will be needed, with 150 nurses and 150 enlisted men, who are to act as stewards, orderlies, etc. Dr. McGuire himself will head the staff of surgeons and will be in command of the unit during the operations in France. The other surgeons will be recruited in

Virginia cities. Dr. McGuire says:

"I know there will be a patriotic response to our appeal for surgeons and nurses for service in France. How long it will take to perfect our plans and when we shall sail, are, of course, questions to which I can give no answer at this time."

Casualties among medical officers on the western front have not been in any sense excessive and have not justified the extravagant reports in circulation.

Dr. Douglas Vanderhoof says:

"In the past few weeks curiously exaggerated reports have been circulated relative to casualties among medical men in the war. Recently The Wall Street Journal reported that 60,000 men in the medical corps had been killed since the beginning of hositlities. It has also been said that the percentage of losses among medical men is greater than in any other branch of the service, even including aviators. The tremendous amount of misinformation that has been circulated regarding doctors during the past two or three months would be amusing were it not for the worry and anxiety it has caused among friends and relatives.

"In contradistinction to the above, the Official Bulletin—the government's daily newspaper—for June 16 publishes an interview with Colonel T. H. Goodwin, of the Royal Medical Corps of Great Britain, flatly contradicting the story that 60,000 English doctors have lost their lives in the service. The total loss, Colonel Goodwin is quoted as saying, is not two per cent. of that number. He further stated that there are only 12,000 medical men in the British army.

"Since then, Colonel Goodwin, who is in this country, cabled to the British War Office for the actual facts. He received the following data: the total casualties among medical officers of the British forces, on the western front, from the beginning of the war to June 23, 1917, were: killed, 195; wounded, 707; died of disease, 62. Hence the total number of casualties from actual war injuries on the western front was 902, of which 195 were killed. This is entirely different from some of the statements which have received wide publicity in this country—some even semiofficial in character—which have reacted to the detriment of the efforts to secure offiecrs for the medical reserve corps."

QUESTIONS ASKED AT THE RECENT MEETING OF THE N. C. STATE BOARD OF MEDICAL EXAMINERS.

Pharmacology, Materia Medica and Therapeutics, by Dr. Jno. Q. Myers, Charlotte, N. C.

1. Give origin and dose: (a) Acetanilid, (b) Veronal, (c) Aspirin, (d) Emetin, (e) Apomorphine.

2. Describe and give an example of each of the following incompatibilities: (a) Chemical, (b) Physical, (c) Physiological, (d) Pharmacological.

3. Name the physiological antidote for each of the following: (a) Strychnine, (b) Morphine, (c) Phosphorus, (d) Arsenic, (e) Iodine.

4. Define and give example of the following: (a) Alkaloid, (b) Glucoside, (c) Solution, (d) Infusion, (e) Emulsion.

5. Convert the apothecaries measure into metric fluid measure.

6. What principles would you follow in the diet of a case of diabetes mellitus with persistent glycosuria?

7. How would you increase water elimination in edema?

8. How would you treat collapse due to vaso-motor failure?

9. How would you treat collapse due to severe hemorrhage?

10. Write five prescriptions of your own selection and name the disease for which each may be indicated.

Gynecology, Obstetrics and Pediatrics by Dr. E. G. Moore, Elm City, N. C.

Obstetrics.

1. Describe briefly the anatomy of the (true) female pelvis, and give the measurements of its principal diameters.

2. (a) What is the mechanism of labor? (b) Describe the normal mechanism of labor in a head presentation, L. O. A.

3. Give the clinical history and diagnosis of ectopic pregnancy.

4. Give the clinical history, diagnosis and treatment of a case of toxemia of pregnancy occurring in the last month.

5. What prophylactic measures would you observe in the management of the third stage of labor to prevent a postpartum hemorrhage? (a) Mention the causes, and outline the treatment of postpartum hemorrhage (b) Outline the treatment of eclampsia occurring after delivery.

Gynecology.

1. Define dysmenorrhea. Mention its causes, and outline its treatment.

2. Mention three varieties of solid ovarian tumors, and give the different diagnosis of each variety.

3. What is trachelorraphy, and what are its indications?

Pediatrics.

1. (a) What are the elements of food value in the composition of milk? (b) Give the percentage in human milk. c) Give the percentage in cow's milk. (d) State the number of milk teeth, and give the average age at which primary dentition begins and is completed.

2. Give the differential diagnosis between scarlatina and measles, and outline the treatment of each.

Surgery, by Dr. H. A. Royster, Raleigh, N. C.

1. Discuss the surgical importance of acidosis.

2. Name any drug used as a local anesthetic; give proper percentage and technique.

3. (a) Give the clinical differences between sarcoma and carcinoma. (b) Name the signs of inflammation and four ways in which it may terminate.

4. Name the varieties, the causes and the signs of fractures. How would you treat a fractured rib?

5. Give the physical signs of popliteal aneurysm and the best method of treatment.

6. Mention and distinguish briefly the conditions giving rise to acute abdominal pain.

7. Describe the pathology and management of tuberculosis of the knee joint.

8. Define laminectomy, esophagotomy, torticollis, gastrectomy, pyonephrosis, acromegaly, teratoma, elephantiasis, pseudoarthrosis, cystoscopy.

9. Give the pathology and symptoms of hypertrophy of the prostate gland.

10 (a) Give the indications for enucleation of the eye. (b) What are the symptoms of acute empyema of the maxillary sinus?

Anatomy, by J. F. Highsmith, M. D. Fayetteville, N. C.

1. Describe the upper extremity of the tibia, its blood supply, and important muscles attached to it.

2. Describe the elbow joint. Name the ligaments and give their attachments.

3. Describe Poupart's ligament, naming its anatomic relations and uses as a surgical guide.

4. (a) Locate and describe the rectum. (b) What structures can be palpated through the rectum in the two sexes?

5. Give origin and description of the musculospiral nerve.

6. Mention the branches of the internal iliac artery.

7. Name the ductless glands, and minutely describe any one of them.

8. (a) Discuss the anatomy of the liver. (b) Why pain in the region of the right shoulder in the disease of the liver and gall bladder?

9. Describe the male urethra and give its divisions.

10. Beneath what point of the anterior chest surface are the cardiac valves?

Physiology Pathology and Bacteriology, By M. L. Stevens, M. D., Asheville.

1. Define Hemoloysis; Indican; Hemoglobinuria; Microtome; Aerobic.

2. If both kidneys are removed or are rendered functionless, what symptoms develop?

3. What are the functions of the liver?

4. What is pain, and what service, if any, does it perform?

5. Define Infiltration and Degeneration, clearly differentiating the one from the other.

6. Tabulate briefly the blood changes found in pernicious anaemia, indicating gross appearance, hemoglobin, number of red cells, size and form of red cells, nucleated red cells, number of white cells, lympocytes and hyaline cells, myelocytes.

7. (a) Give cause or causes of acute lobar pneumonia. (b) Describe the local lesion (gross pathology). (c) State briefly the effect of the disease on the normal function of the heart.

8. Describe proper method of obtaining and preparing specimens to be sent to laboratory for examinations: (a) Blood in suspected malaria; (b) Blood in suspected typhoid; (c) Blood in suspected syphilis; (d) Throat specimen in suspected diphtheria; (e) Sputum in suspected tuberculosis.

9. Name (a) Four pyogenic cocci; (b) Three pathogenic diplococci; (c) Four pathogenic bacilli; (d) One pathogenic spirillum.

10. What requirements must be fulfilled in order to prove that a given organism is the specific cause of a disease?

Note.—A laboratory or oral examination is also required.

Chemistry and Hygiene, by Isaac M. Taylor, M. D., Morganton, N. C.

1. What is synthesis? Analysis? An element? Valence?

2. Name a synthetic organic chemical compound used in medicine, with its formula. Give the symbol of five elements with indicate dvalence and a chemical

compound of each.

3. What is calcium sulphate? Its formula? and what peculiar property renders it useful in surgery?

4. What chemical tests would you apply to determine the purity of drinking water?

5. What is the chemical process in testing diabetic urine with Fehling's solution, and what is the precipitate? In making the yeast test, from what product do you determine the amount of sugar present?

6. Give a test for the presence of each of the following urinary constituents: bile, blood, acetone, albumen.

7. To what is the color of blood due, and in what form does it occur?

8. What chemical function does pepsin perform in digestion? What chemical function does Pancreatic fluid perform?

9. Discuss the prevention of the further spread of typhoid fever in a rural household when a case occurs, and the protection of the neighborhood.

10. In a health survey of a school, what physical defects should we look for in a backward child.

11. Discuss the cause and prevention of scurvy aboard ship and among troops.

Practice of Medicine, by John G. Blount, M. D.

1. State the essential differences between (a) septicemia, (b) pyema, (c) sapremia.

2. What is a petechial eruption? Name several diseases with a petechial rash as an important diagnostic symptom.

3. Differentiate between (a) tetanus, (b) strychnia poisoning, (c) cerebrospinal meningitis. What is the immunizing dose of tetanus antitoxin? What is the curative dose?

4. Symptomatology of uncinariasis. Give treatment and mode of administration.

5. Name six pathological lesions that may cause ascites.

6. Symptomatology and treatment of acute poliomyelitis.

7. Upon what prominent symptoms would you rely in diagnosing aneurysm of the descending aorta?

8. Describe von Graefe's and Stellwag's signs. Upon the presence of these and what other symptoms could you diagnose the disease they accompany?

9. What symptoms follow lesion of the third nerve?

10. Name the different types of epilepsy. Describe an attack in each type.

11. Name the different varieties of pemiphigus and outline briefly the treatment.

12. Give a brief description of paretic dementia.

BOOK NOTICES.

A Text-book of First Aid and Emergency Treatment, by A. C. Burnham, M. D., Medical Corps, U. S. R., Instructor in Surgery in the Polycling Hospital, New York City; Attending Surgeon, Department of Surgery, Vanderbilt Clinic, College of Physicians and Surgeons, New York City. Illustrated With 160 Engravings and Two Plates. Lea & Febiger, Philadelphia and New York, 1917. Price $2.00.

For an army surgeon, this little book has considerable value. It has sufficient merit for it to find its way in the hands of every surgeon who speaks the English language, now engaged in the world war in the different sections of Europe. The 160 engravings with two plates are sufficient to illustrate most every subject that the volume deals with. The book from every standpoint is thoroughly practical. It treats of injury in every way. Every subject in the book is intelligently and practically discussed. This book supplies all the literature that is needed in the First Aid Hospital. This is the first volume of the kind that we have seen or had the pleasure of examining. It is a good book and will be read and appreciated by the class of readers that it is intended. The volume is attractive in appearance containing 307 pages. The illustrations are fine.

Hospital of the Protestant Episcopal Church in Philadelphia. Medical and Surgical Reports of the Episcopal Hospital. Volume 5. Philadelphia, Press of Wm. P. Dornan, 1916.

To any one who is interested in hospitals ought to read this volume. It is as the title indicates the report of the Episcopal Hospital of Philadelphia. On its medical staff are a great many familiar names. On its surgical staff names like Deaver and Ashhurst appear. It is profusely illustrated and all of them are original. In many respects the volume is equal to that of the Mayo Hospital reports. More attractive in some cases because this report gives the description of unusual cases only. The volume is handsomely bound and has 326 pages.

"Alcohol. Its Relation to Human Efficiency and Longevity," by Dr. Eugene

Lyman Fisk, Medical Director of the Life Extension Institute, and Author, With Professor Irving Fisher, of "How to Live." 216 Pages. Bound in cloth. $1.00, Net; by Mail, $1.12. Funk & Wagnalls Company, Publishers, 354-360 Fourth Avenue, New York City.

It would be well enough for every man of the medical profession to read this book. Some of the writer's statements may not literally be true but he gives good advice and makes good statements. An article on the medical value of alcohol was written and published by the reviewer of this book about 26 years ago, and he greatly depreciated the value of alcohol as a medicine. This was about ten years before other articles of the kind were published. In all probability alcohol could be eliminated from our list of remedies without doing the public a great deal of harm. I did not say that it should be completely eliminated from our list of remedies, and I can't say it now. The book is little, but attractive in its make up. It contains 216 pages.

The Mastery of Nervousness Based Upon Self Reeducation, by Robert S. Carroll, M. D., Medical Director Highland Hospital, Asheville, North Carolina. New York, The Macmillan Company. Price $2.00.

This book was intended to teach the nervous patient to reeducate himself or herself. Men or women suffering from nervous debility will find this book is ever ready a practical help in the way back to health. Dr. Carroll gives in simple fluent language, apt in expression, the causes of nervousness, its relation to temporary conditions of living and efficient needs to overcome it. The physician who recommends this work to his patient will find this valuable assistant to supplement his treatment. Dr. Carroll writes beautifully, his style of writing is very attractive, his points are clear and forceable and logically presented. He is an artist in expression and an expert in his specialty. He is one of the best authorities in this country on nervous and mental diseases. It is a particular pleasure to recommend this book. Every page, every paragraph, and every sentence in it exhibit evidences that the doctor is thoroughly familiar with his subject in which he is dealing. We will congratulate Dr. Carroll in advance, for what we predict wil lbe a very popular book.

The Causes of Tuberculosis Together With Some Account of the Prevalence and Distribution of the Disease, by Louis Cobbett, M. D., F. R. C. S. University Lecture rin Pathology, Cambridge. Cambridge: at the University Press, 1917.

This book is possibly as complete and upto date as any book of its kind published. It deals with the subject of Tuberculosis which never fails to interest the medical profession as a whole. This volume deals exhaustively of the prevalence of the disease, its distribution, etc. This volume is peculiarly suitable for the public readers who are interested in public hygiene. Outside of the medical profession, it should be read by all teachers, administrators, and members of public health and hygiene communities, for members of boards of health, teachers, institutions and for those interested in health resorts. Hospitals treating diseases of all kinds, the book is indispensible as it occurs to the reviewer. The book is arranged in such a way that it should appeal to various classes of readers, especially ought it to appeal to the bacteriologists and laboratory students, to municipal engineers and architects, to medical officers of health and sanitary inspectors and to all teachers and administrators. The book is a large one containing 707 pages, including the well arranged index. It possibly is the best illustrated book of the kind now on the market. The illustrations are not only good but seem to be well and intelligently selected. We do not hesitate to recommend the book. Price $5.25.

Poliomyelitis in All its Aspects, by John Rurah, M. D., Professor of Pediatrics in the University of Maryland Medical School and the College of Physicians and Surgeons; Consulting Pediatrist to the Bayview Hospital and to the Church Home and Infirmary; Visiting Pediatrist to the Mercy Hospital for the Women of Maryland, Robert Garrett Hospital for Children, nursery and Child's Hospital, and to the Children's Hospital School and Erwin E. Mayer, M. D., First Lieutenant in the Medical Officers' Reserve Corps, United States Army; Former Senior Resident Physician at the Mercy Hospital; Instructor of Medicine in the University of Maryland Medical School and College of Physicians and Surgeons. Illustrated with 118 Engravings and Two Plates. Price $3.25. Lea & Febiger, Philadelphia and New York, 1917.

In the preparation of this volume the

authors have endeavored to collect the various facts concerning the disease as far as they are known at the present time and to give briefly such theoretic considerations as may seem to be either of interest or importance. They have attempted to gather together in one volume the information which they themselves have wanted on the subject. The literature of poliomyelitis has grown to enormous proportions and there are over three thousand articles which are being added to daily. Throughout the text references have been made to the articles, which have been consulted, but no extensive bibliography has been added. There is, at present, no adequate account of the disease in one volume, although there are many excellent momographs featuring one or more phases of the subject. To get a satisfactory account of the disease one must do extensive reading which requires, not only time, but access to a well-stored library.
plies even in a small measure what seems to be a need, the authors will be amply requited for their labor in preparing it.

The illustrations, 118 in number, and 2 plates have been examined with particular pleasure and with profit. They are adequate and are well selected. They are original and illustrates the vast experience the authors have had. It deals fully enough with the subject it treats. The disease is not prevalent enough and never has been, to justify the production of a much larger book than the one which is before us. To deal with the subject more extensively would mean a great deal of repetition which would detract very much from a volume of this character. While the volume is not very large, it makes a nice appearance printed on good paper and contains 297 pages. The book is a good one and just at this time a very appropriate one and it gives us pleasure to recommend it.

Awarded Grand Prize, Paris Exposition, 1900. Progressive Medicine, a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, Etc. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglas Memorial Hospital and to the Burd School; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Volume 1, March, 1917. Surgery of the Head and Neck-Surgery of the Thorax, Excluding Diseases of the Breast-Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza—Diseases of Children—Rhinology, Laryngology and Othology. Lea & Febiger, Philadelphia and New York, 1917.

This volume of Progressive Medicine is one of the best numbers that we have had the pleasure of examining for some time. It deals with the surgery of the head and neck of the Thorax, excluding disease of the breast, infectious diseases, including acute rheumatism, croupous pneumonia and several other diseases in that location. The illustration comes up to the usual high standard. The volume is of the usual size containing about 320 pages.

The writers have omitted long descriptions of major operations and their technique. This is proper because it is not essential. They have made no attempt to prepare a book with every minor detail and illustration. In some respects they adhere, as the physicians do, that is, to treat the sick patient by whatever means his judgment may consider best adapted to the individual case and circumstance. These suggestions are fine for a physician or surgeon to label or name the disease and follow a prescribed course of treatment is obsolete and should be eliminated.

Manual of the Diseases of the Eye for Students and General Practitioners, by Charles H. May, M. D., Director and Visiting Surgeon, Eye Service, Bellevue Hospital, New York; Attending Ophthalmic Surgeon to the Mt. Sinai Hospital, New York; Consulting Ophthalmologist to the French Hospital, to the Italian Hospital, New York, and to the Manmouth Memorial Hospital; Formerly Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Ninth Edition Revised with 377 Original Illustrations Including 22 plates, with 71 Colored figures. Price $2.50. New York, William Wood and Company, 1917.

Dr. May deserves the congratulations of the medical profession of this country.

This is the ninth edition of this most excellent book. Three years ago the eighth edition appeared, two years later it was reprinted. It was also again reprinted in February, 1917.

The volume has been kept up to date; it has not been increased in size, the original plan of the author of presenting a book for the student and general practitioner has always been adhered to. The volume is very completely illustrated. It has 377 original illustrations that have been carefully selected and intelligently illustrates the reading matter. The artists and printers have done their work well. The volume is beautiful and attractive with 440 pages fully indexed. It is my pleasure to recommend this book.

Handbook of Gynecology for Students and Practitioners, by Henry Foster Lewis, A. B., M. D., Professor and Head of Department of Obstetrics and Gynecology in Loyola University School of Medicine; Chief of Obstetric Staff of Cook County Hospital; Fellow and President of the Chicago Gynecological Society; Late Assistant Professor of Obstetrics and Gynecology in Rush Medical College (in Affiliation with the University of Chicago). Alfred De Roulet, B. Sc., M. S., M. D., Professor of Gynecology in Loyola University School of Medicine; Attending Gynecologist to the House of the Good Shepherd, and to St. Bernard's Hospital; Obstetrician and Chief of Staff of St. Margaret's Home and Hospital. With One Hundred and Seventy-seven Illustrations, St. Louis. C. V. Mosby Company, 1917.

Dr. Lewis De Roulet from the long experience in the class room and in various clinics have seen the need for a hand book of gynecology whose text should be logically arranged and classified. The material of the various subjects modified or arranged according to our modern views of etiology and pathology of abnormal conditions without undue reputation, and which can be primarily adopted to the needs of third year and fourth year medical students as well as the young practitioner who has not yet settled into a special field.

The authors say that it is often the reproach of a teacher or a writer on medical subjects that he does not realize the relative importance of his specialty to the rest of medical knowledge. They have tried to appreciate that gynecology is a lesser subject than medicine, surgery, or obstetrics, and have tried to prepare a book which will recognize, in its demand upon the time and energies of the student and reader, the proper rank of the specialty.

Building Human Intelligence. "Only That May Enter Our Mind Which Has Made its Way Through the Senses." St. Thomas Aquinas. By Dr. Arnold Lorand, Physician to the Baths, Carlsbad. Author of "Old Age Deferred" and "Health Through Rational Diet." Price, $3.00.

An extremely readable and constructive work, designed to assist every man and woman to mobilize the personal assets of physical health, education and reasoning power for the development of a forceful personality. A healthful, normal, energetic mind should be supported by a strong, well nourished body. The book is constructed on a fine fundamental bases. The skeleton of the book was wisely conceived by the author. We claim that in order to build up a strong mentality in a man or woman an intelligent care of the individual by hygienic and therapeutic means, should have careful attention. The functions of the heart or of the kidneys should be kept in as normal a state as possible. The author deals with correct feeding, which is very important. He has suggested a number of means for the health of the mind based of course upon a perfect hygienic-physiologic foundation of the body. Very intelligent people have wasted many of their mental facilities, because they did not pay the proper amount of attention to preserving their general health and their strong normal mentality. Every chapter in the work contains many useful ideas. The style of Dr. Lorand's writing is very attractive, the book is interesting and every subject deals with ordinarily. We like the volume, we like its contents. It is a handsome volume of 450 pages and is well worth the price.

Practical Materia Medica and Prescription Writing With Illustrations by Oscar W. Berthea, M. D., Ph. G., F. C. S., Assistant Professor of Materia Medica and Instructor in Prescription Writing, Tulane University of Louisiana. Former Professor of Chemistry and Professor of Pharmacology, Mississippi Medical College, Etc. Second Revised Edition, Philadelphia. F. A. Davis Company, Publishers, English Depot, Stanley Phillips, London, 1917. Price $4.50.

The second edition of this very valuable work has been very thoroughly revised and the text now is up-to-date, par-

ticularly with reference to the pharmacopoe changes. Some new drugs have been added, both official and otherwise. Some have been retained that are now not official in following the pharmacopoeia, many have been dropped, with a sigh of relief. Much new matter has been added that it is hoped will prove of value.

Dr. Bethea is well known as teacher and writer all over the country, in fact, he is the author of this volume, is a sufficient guarantee of its value to the medical profession. The volume is a handsome one containing 562 pages. The volume could be larger and possibly more complete, but for the general use of the practitioner, it is large enough and incorporates all the material which the average practitioner needs.

The Cancer Compaign Quarternary; The Problem; The Public; The Patient; The Physician, by William Seamon Bainbridge, A. M., Sc. D., M. D., C. M., New York City.

Physical Exercises for Invalids and Convalescents, by Edward H. Ochsner, B. S., M. D., F. A. C. S., President Illinois State Charities Commission; Attending Surgeon Augustana Hospital, Chicago. Illustrated, St. Louis, C. V. Mosby Company, 1917.

This is a small boklet of 54 pages. It deals with the subjects of which it treats in a very intelligent way. It is not indexed, but very neatly printed.

Department of Commerce, Bureau of the Census, Sam. L. Rogers, Director. Mortality Statistics, 1915, Sixteenth Annual Report. Government Printing Office, Washington, 1917.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment of Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners by Leading Members of the Medical Profession Throughout the World. Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with the Collaboration of Charles H. Mayo, M. D., Rochester; Sir Wm. Osler, Bart., M. D., F. R. S.; Rupert Blue, M. D., D. P. H., Washington, D. C.; Frank Billings, M. D., Chicago; John G. Clark, M. D., Philadelphia; A. McPhedran, M. D., Toronto; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; Charles Greene Cumston, M. D., Geneva; Arthur F. Beifield, M. D., Chicago; Richard Kretz, M. D., Vienna, with Correspondents in Montreal, London, Paris, Berlin, Leipsic, Brussels, and Geneva. Volume 2, Twenty-seventh Series, 1917. Price $2.00. J. B. Lippincott Company, Philadelphia and London.

This volume may not be quite as large as some that have preceded it. It contains 313 pages, and the general artistical character of the volume is the same as it has been for a number of years. We especially call the writer's attention to the numerous illustrations in this volume that are particularly valuable. It also gives us pleasure to look over these review volumes, and frequently in practice we refer to them.

Miscellaneous.

General Narcosis in the Cure of Hysterical Mutism, Aphonia, and Deafness.—Moriondo refers to the work of Gioffredi, Arslan, and Fazio toward the end of the last century in this domain. In the present war cases of this sort have multiplied and recently Professor Massei reported on the use of other narcosis in this connection. These military cases are of a severe type, resisting ordinary measures of treatment. The author has had under his care ten or a dozen cases of functional deafness or deafmutism following explosions, etc. Treatment of narcosis failed to benefit eight patients whose histories are given in detail. In three others the results were encouraging, but one patient was classed as a simulator. Of the other two one regained the power of speech, but with a whispering voice; while the other could speak in normal timbre but only with great effort.—Archivo Italiano di Otologia.

Trauma of the Labyrinth and Traumatic Neurosis.—Torrigiani has seen about 200 cases of indirect injuries of the internal ear with lesion of the middle ear, due to shell explosion. Among these cases the phenomena of traumatic neurosis were frequently seen, and it is possible to draw certain conclusions based on the most thorough Barany tests and finds of lumbar puncture. The author concludes that the injury, unless limited to the middle ear, does not involve the posterior labyrinth but only the cochlea because of the lessened resistance of the anatomical structure to trauma of the

membrane of Scissner and the sensory epithelia of the anterior labyrinth. In none of the cases was the caloric reflex abolished but all degrees of diminution of the cochlear function could be determined including many cases of total deafness. Headache and psychic disturbances of every degree up to the full picture of traumatic neurosis were almost constantly present. In the severer forms the symptoms, while more pronounced, were of the same type as in the lighter forms. Lumbar puncture used as a diagnotsic resource, was really performed for relief of the headache; in the more recent cases blood was sometimes present in the punctate. This find seems to suggest something more than mere traumatic neurosis and the possibility of anatomical lesions.—Archivio Italiano di Otologia.

"A Psychological Analysis of Stuttering."—By Walter B. Swift, M. D. (Journal of Abnormal Psychology, October-November, 1915) Summary: In very brief form a complete, automatic, visualization process may be developed by vocal drill in cases where previously there was total absence of all these visualization processes during speech.

In relation to the stuttering, the symptoms disappeared in proportion as the picturing processes developed. This may therefore be considered as the "new treatment indicated" in the article in The Journal of Abnormal Psychology. I next plan to present a long series of such cases so treated, presenting both the original absence of picturing and its final development. By that time I think I will be ready to give out my system of treatment in final form.

Studies in Speech Disorder, No. 5—The Speech in Athetosis.—By Walter B. Swift, M. D. (Review of Neurology and Psychiatry, April, 1916.) Summary: Athetoid speech is a constant variation in vowel form and consonant sound, clear only when correctly struck during the constantly changing contractions, or when, during rare moments of relaxation, the sounds are hit before contractions occur.

The Possibility of Voice Inheritance.—By Walter B. Swift, M. D. (Review of Neurology and Psychiatry, March, 1916). Summary: (1) Literature on eugenies and cacogenics shows that bone shapes are probably inherited. (2) The noses of the Indians, and the Greeks, and the Jews, prove this pretty conclusively. (3) The lower animals afford data that put this thesis beyond doubt. Ohus it is proved that bone forms are inherited. Then what is contained in them is also inherited, and therefore the functions that those cavity shapes subserve, such as vocal quality and utterance, are likewise inherited.

In brief, I claim abundant evidence to show the possibility of voice inheritance.

Treatment of Enteric Fever With Colloidal Gold.—Salomon, in The La Presse Medicale, says that the use of colloidal metals in infective conditions appears to have been relatively common in France since 1902, when Netter drew attention to its possibilities. It, nevertheless, has not, in the opinion of Saloman, won the popularity which it deserves, and he considers that this is due to the unpleasant results which frequently follow the intravenous method of injection, which is that generally practised. Enteric patients, moreover, appear to be less tolerant of the drug, when administered in this manner, than are persons suffering from other diseases. In 1914 Letulle and Mage reported excellent results in enteric fever, and the difficulty of employing balneation systematically in the military hospitals no doubt helped to introduce a method of treatment which can be easily carried out.

The bad results which are liable to follow the introduction of colloidal gold into a vein, while perhaps especially severe in enteric fever cases, occur equally in other diseases subjected to the same method of treatment. The injection is followed by violent rigors and symptoms resembling a malarial attack. Vomiting and involuntary evacuations sometimes occur. Cyanosis, dyspnoea, and a rapid thready pulse often cause great anxiety, and must be propmtly treated with hot drinks and cardiac stimulants. A fter this cold shivering stage the temperature rises to high levels, which, of themselves, must be regarded as dangerous. Profuse sweating with a fall of temperature follows, and in favorable cases the pyrexia subsides altogether, though this appears to occur seldom after the first injection.

The writer is convinced of the efficacy of this treatment which he employed in 77 cases, and would have continued to employ, had he not been impressed by the risk of fatal collapse. The dose given did not affect the result. Some patients tolerated 2 c. c. fairly well, others were seriously upset by doses of 1 c. c. or even ½ c. c., and it seems probable individual idiosyncrasy plays some part. The moral is therefore, to try and get equally good therapeutic results by another meth-

od of administration than the intravenous one. As Salomon had observed that the first dose usually caused the greatest disturbance, he endeavored to accustom the patient to the drug by preliminary subcutaneous injections, doses of 10 to 12 c. c. being given by this route. Slight reactions of temperature sometimes followed the injections and the general results, though fairly favorable in 44 cases, appeared doubtful. The subcutaneous injections, moreover, were extremely painful. Finally, then, the doctor tried intramuscular injections, and found them free from the disadvantages of the intravenous and more effective than the subcutaneous ones. They cause no pain. There is sometimes a short attack of shivering, and usually a reactionary rise of temperature. By the next day the temperature of the patient has been appreciably reduced and the general condition improved. Occasionally there is very free discharge of urine, and the temperature falls to normal and remains there. More frequently further injections are required, being indicated when the temperature begins once more to rise, usually at intervals of two days. The dose employed for intramuscular injection is from 2 to 4 c. c., and, in Salomon's view, the action, if a little slower, is as reliable as when the drug is administered intravenously.

Pyloric Stenosis in Infants.—Gallie and Robertson, in The Canad. Med. Assoc. oJur., discuss the treatment of congenital pyloric stenosis, a condition which, if untreated, is associated with a mortality of practically 100 per cent. Under medical treatment, which consists in proper feeding and frequent gastric lavage, a certain percentage slowly recover. The proportion of recoveries with medical measures alone is between 40 and 60 per cent. of the cases, as recorded by various observers.

It is always advisable therefore to attempt medical measures first, but it is pointed out that this method of treatment is very tedious and sufficiently doubtful to demand the shorpest attention of the physician to see that the patient does not slip past the mark beyond which no form of treatment can save him. These patients have a habit of remaining in a stationary condition for days or weeks, and then suddenly of succumbing to inanition. They believe that, if there is no prompt response to medical treatment, some radical measure must be adopted if a high mortality rate is to be avoided. It is imperative that operation, if it is decided on, should be performed before the starvation of the patient makes interference dangerous.

The operation which the writers have employed is known as the Webber-Rammstedt method. The abdomen is opened by a small incision through the right rectus above the umbilicus. The thickened pylorus is then brought outside the abdominal incision and the condition inspected. Surrounding the pyloric orifice there is situated a smooth round swelling, white in color, varying in size from a small to a large hazel-nut. The mass may be as hard as cartilage or of the consistency of uterine muscle. The stenosis is due entirely to the contracted and hypertrophied muscle, and there is no diminution in the size of the tube of mucous membrane, as can be demonstrated post mortem by removing the muscular coats.

By squeezing on the air in the stomach the degree of stenosis can be demonstrated.

An incision in the long axis of the pylorus is now made along the entire length o fthe swelling at its upper border, where there is a space about an eighth of an inch wide which is practically bloodless. The incision is carefully deepened till the mucous membrane begins to bulge into it. The external surface of the mucosa is exposed throughout its whole length. The muscle is so hard that, after the incision is completed, there is very little retraction, and the cut edges therefore should be gently stretched with forceps, so that the mucosa is exposed for a width of an eighth of an inch or more. It will then be seen to be of large lumen and to bulge into the wound. There is rarely any bleeding, but small points of oozing should be arrested. The relaxation of the stenosis can be finally demonstrated by passing a duodenal catheter or by simply compressing the air in the stomach through the pylorus.

The method is simple and the operation can be completed in fifteen or twenty minutes. The writers had eleven recoveries out of sixteen cases. Most of the fatal cases were too late in being operated upon.

Treatment of Burns.—Algave (Presse Medicale) deems superior to the paraffin and ambrine treatment in severe burns, the use of what he terms taffeta chiffon in conjunction with a ten per cent. solution of gomenol in oil. The taffeta chiffon is obtainable commercially, and is made by causing a thin layer of linseed oil to adhere to fine tarlatan. This ma-

terial which protects the area without adhering to it, prevents not only pain and bleeding at the dressings but likewise the pain caused between times by movements of the part when a material adhering to the tissues has been used. The gomenol has analgesic, antiseptic and deodorant properties. In recent burns, the oily solution of this agent is first dropped or sprayed on the part in sufficient amount to cover it completely in a thin layer. A sheet of taffeta chiffon, previously boiled for four or five minutes and projecting several centimetres beyond all margins of the burned area is next applied. Then over it is placed a layer of sterile gauze and one of absorbent cotton, the whole held by a bandage. In burns of the fingers small squares of the material are placed between them. Redressings are painless and are done daily. The gomenol prevents all fermentation in the discharges, and the foul odor noticed where ambrine is used is disguised by it. When the dressing is removed the wound itself is gently washed with boiled tepid water, and the surrounding zone with ether. Dressings should at first be performed rapidly, as the desiccation attending exposure to air becomes painful in a few minutes. Later, however, exposure is painless and seems to favor epidermal repair. Burns of the second and third degrees heal satisfactorily in two to four weeks under this method, and deeper burns likewise progress rapidly.

Disinfection of Drinking Water.—Dakin and Dunham (British Medical Journal) say that chloramine-T was not very efficient for the disinfection of contaminated drinking water, requiring a considerable proportion of the drug and rendering the water decidedly unpalatable. The acidulation of the water with any acid, such as citric, tartaric, etc., greatly enhances the disinfectant powers of the chloramine-T and the water was not unpleasant to the taste. This combination was not suited for military use since the drug could not be made up into tablets with the acid without undergoing decomposition. Further experiments along this line led to the elaboration of a substance, p-sulphondichloraminobenzoic acid, which was called "halazone" as a convenient name indicating something of its nature. This chemical could be readily prepared from cheap and abundantly available materials, was stable, could be made into tablets, was powerfully disinfectant to water, and did not affect its palatability. The method of its preparation is described by the authors. A concentration of one in 300,000 would sterilize ordinary heavily contaminated water in half an hour. It was found most satisfactory to mix the drug with some salt, sodium carbonate having been found to give the best results. Tablets were made of the following composition: four per cent. each of halazone and sodium carbonate and ninety-two per cent. of pure sodium chloride. The drug should be ground with the dry salt and the carbonate then added. Tablets could be made of this combination without the use of any lubricant or other addition. The tablets should then be tested for their strength. Each such tablet should weigh about 100 mgm. and should be stored in amber glass bottles. Each tablet will sterilize one litre of water. Such tablets could be made at a cost of about two cents for the sterilization of about 100 gallons of water.

The Placenta as a Galactagogue.—In The Gazzetta Italiana delle Levatrici for July, 1916, Teresa Bianchini reports five cases of placentophagy which came under her notice in the Italian marches. The afterbirth was taken to increase the secretion of milk, which in all the women had failed without obvious cause after previous confinements. The placenta was cut up and washed, cooked in salt water, except in one case, in which broth was used for the purpose, and eaten mostly in large pieces. Except for the cooking the method of administration was practically that naturally followed by some animals—for instance, the bitch, which swallows its own afterbirth immediately after expulsion. The treatment is said to have been successful after other methods of stimulating the milk secretion had failed. The placenta was used in antiquity and in the middle ages as a remedy in difficult labor, and in our own day the human afterbirth and that of the sow has been used in extracts given in pills and other vehicles to stimulate the mammary function. In all parts of the world there are many places where the women still hold by the old tradition. In Morocco it is believed that eating the placenta prevents barrenness and hastens delivery. Preparations of the placenta hold a considerable place in Chinese therapeutics. It is regarded as the best remedy for chlorosis and is useful in cases of anemia following parturition. It is thought to be most efficacious when taken fresh, but it is also given dried and in pills. Madame Louise Toussaint, a French midwife, quoted by Cabanes in

his Remedes d'autrefois (Paris, 1905), speaking of women in labor, says: "Notwithstanding the disgusted protests which will come to the lips of many of you, O accoucheurs and midwives, in reading me, give them, believe me, some fragments of their own placenta and you will tell me what happens. You will see how much you will in this way promote rapid recovery and with what abundance and rapidity the milk will come on. Do not forget that even in non-pregnant women and in virgins the milk secretion may be made to appear by simple placenta feeding." The same woman observer affirms, from her own experience, that there is nothing like the injection of sheep's placenta, dried and then triturated with powdered sugar, for making the milk come abundantly in women who had none, and also for doubling the daily output in nurses. Cabanes tells us that at the fourth French Congress of Internal Medicine, held at Montpellier in April, 1898, Dr. Iscovesco presented a communication on the therapeutic action of the placenta illustrated by more than a hundred cases. He used sheep's placenta in tablets, each representing 0.25 gramme of the fresh substance; the aily dose never exceeded 1.50 grammes. This seemed to have a favorable effect on the secretion of milk. The treatment was also said to have brought about remarkable improvement in chronic metritis with hypertrophy of the uterus and concomitant catarrh even when the appendages were diseased, and in cases of abnormal involution of the womb after delivery.—British Medical oJurnal, Feb. 10, 1917.

Smallpox Vaccination by Puncture.—Dr. Hill, in The British Medical Journal, says he believes that the best method of vaccination when many are to be vaccinated is as follows:

1. The sleeve is rolled up.
2. Orderly 1 washes the arm with soap and water.
3. Orderly 2 washes the arm with rectified spirits.
4. Orderly 3 washes the arm with ether.
5. Orderly 4 breaks the capillary tube of glycerinized vaccine and sets the rubber bulb or other method of expelling contents, handing it to Orderly 5.
6. Orderly 5 expels the vaccine at three (or four) points on the arm, making a triangle (or square) having not less than 2 inches between the points.
7. Orderly 6 sterilizes an ordinary sewing needle and hands it to the medical officer.
8. The medical officer punctures the arm through the drops of vaccine. Six tiny punctures, drawing no blood, are made through each drop, each set of six occupying a space of not more than one-sixth inch square. The needle is held almost parallel with the surface. Not over one-thousandth of an inch enters the epithelial layer. A peculiar little "snick" is felt as the needle point goes in.
9. Orderly 7 wipes off the vaccine.
10. The sleeve is pulled down.

(a) The total time from pulling up the sleeve to pulling it down again need not exceed one minute.

(b) After the orderlies have had a little practice three men per minute can be vaccinated without haste or carelessness.

(c) No after-treatment whatever is required; none should be used; the only direction to the men is leave it alone.

The results are:

I. In those not previously successfully vaccinated nothing is found for several days; then develops a typical vaccinal lesion, consisting of one, two, three, or four firm pustules corresponding with the areas punctured. If left alone, without bandage or shield, etc., these remain firm and whole; then dry down into hard "buttons," which finally detach themselves, leaving a cleaned healed base, constituting a typical vaccine scar. If bandages, shields, etc., are used, the moisture from the perspiration, etc., thus retained, macerates the otherwise firm wall of the pustule, which then breaks, thus creating an ulcer open to infection.

II. In those who have been previously successfully vaccinated, a raised red papule develops in a few hours; itches a little, sometimes develops a number of tiny vesicles over its surface, then dies down and disappears. This is the anaphylactic or accelerated reaction, indicating that immunity exists, sufficient to prevent typical vaccinal lesions.

III. Occasionally a mild reaction of this kind, instead of disappearing, develops into a typical vaccine lesion, the anaphylactic papules developing into ordinary vaccine pustules instead of receding and drying up. These pustules then run the ordinary course described under II. Evidently here the immunity from the previous vaccination, while sufficient to give anaphylaxis, was not complete enough for protection.

IV. Very occasionally no reaction of any kind follows the puncture. Only in such cases need revaccination be done. The probable explanation in the few cases observed was improper technique or old vaccine.

(a) Certain rare cases showed the anaphylactic reaction (II), although, according to the history given, they never had been successfully vaccinated and never had had smallpox. They showed history of "chicken-pox," however. Hill investigated two of these cases, communicating with the mother of each and securing from her a detailed account of the alleged attack of "chicken-pox." In one case it was quite evident from the mother's description that the attack was really smallpox; in the other it was extremely probable that it was smallpox.

(b) The only "bad arms" out of many hundreds done that have come to Hill's attention were constituted by slight inflammations about the bases of ulcers, due to prematurely knocking off the dried "buttons" after the vaccination process was quite complete, the buttons having become somewhat loosened but not ready for removal. It must be added, however, that some arms which had been bandaged despite instructions to the contrary flared up more than was necessary, and in a few instances the pustules opened.

For civilian practitioners, not able to employ eight or nine assistants to do the washing, etc., the technique, nevertheless, is so simple that no one vaccination operator need take over five minutes. Its great advantages in civil life are:

(c) Not even adolscent girls object to the punctures; there is no fainting, etc.

(d) There is no waiting, after the vaccination is done, for the vaccine to dry. The instant the puncturing is finished the surplus vaccine is wiped off and the sleeve pulled down.

(e) No bad arms, and no loss of time due to bad arms.

(f) In all open methods of vaccination one obvious source of "bad arms" is infection of the open wound, during and after the removal of the epidermis, from the mouth spray of the vaccinator, his assistants, and the patients themselves, especially if there be a number of the latter, crowding the office and all taking at once, as often happens. In the puncture method no epidermis is removed; moreover, the process is so rapid, and the exposure of the arm so short, that this really serious source of infection in the older methods is almost completely eliminated.

The Effects of High Explosives on the Ear.—Wilson, in The British Medical Journal, concludes a valuable article on this subject as follows:

The normal stimulus is an adequate stimulus for the nerve and is the best stimulus. Electricity is contraindicated and likely to do harm, since it so easily produces vertigo.

In the totally deaf, bone conduction is perceived before air conduction. It is essential to differentiate vibrations from musical notes.

In those cases summation of stimuli plays an important part in the perception of sound.

There is a marked diminution of the duration of hearing along the whole series of forks, both through bone and air. This corresponds and exists pari passu with concentric limitation of the fields of vision. Often both improve together. Frequently the field of vision is more retracted on the side having the greater deficiency of hearing.

If the conducting mechanism is damaged or destroyed it not only takes longer to get improvement ,but complete recovery cannot be expected.

Prognosis is good as a rule, especially in cases in which there is no trauma demonstrable in the peripheral organ, no history of aural vertigo, and a normal caloric reaction. The most noteworthy exception met with so far is damage to the seventh nerve. In these cases hearing returns but slowly, and so far as observed not perfectly, even with a normal drum membrane, little if any signs of middle-ear inflammation, and a caloric reaction present.

Asa result of the concussion due to explosives there is frequently a trauma demonstrable in the ear. This may be accompanied by neurosis (traumatic neurosis), especially headaches and vertigo. The perception of sound is diminished over the whole normal range; the dimunition may be so great as totally to abolish perception of sound. The author has not seen a case yet associated with tone islands. What he does find is a diminution all along the scale both for bone and air conduction.

As the deafness diminishes there may persist for a long time an inability to grasp intelligently what is said or to retain the memory of it. Thus a word may have to be repeated two or three times before the patient gets it; or, if he be asked to repeat two or three tumbers given consecutively, he will repeat the last one; he knows that there were others, but did not get them.

Treatment of Diabetes Mellitus.—Williamson ,in The London Medical Lancet, recommends the following plan for cases which are not complicated and are free from marked acidosis. The first diet to be given is a rigid diabetic diet with the

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addition of ninety grams of white bread daily. This is called Diet I. If this does not soon control the glycosuria, Diet II should be given. This diet differs from the former only in the replacement of the white bread with some starch free diabetic bread. If in turn this fails, then Diet III should be given for one week. This includes feeding at two hour intervals from 8 a. m. to 10 p. m., the total day's food being made up of three or four eggs, sixty to niety mils of cream, a litre of milk and tea, coffee, or beef tea. The eggs and milk may be made into unsweetened custards, if desired, and some of the cream can be given in the beef tea as well as in the tea or coffee. Finally, if this diet does not check the glycosuria, Diet IV should be tried, consisting of a glass of casein or biogene and cream with water every two hours for seven to ten days. Twice a day a cup of tea or beef tea may be given if the patient wishes it. The mixture of casein, cream ,and water is prepared by mixing one tablespoonful each of casein and cream and then adding hot water carefully until the tumbler is filled. It may be sweetened with saccharin and flavored with nutmeg. Two tablespoonfuls of biogene may be used in place of the one of casein. If it is desired to avoid the use of diabetic breads, which are costly, Diet II may be omitted if Diet I fails and Diet III can be tried at once. Diet III is of great service, as it is palatable, can be taken by nearly all patients, and is not very expensive. After the urine has been free dof sugar for a week to ten days the ordinary rigid diabetic diet may be tried. In the more severe cases after a week or ten days of Diets III or IV with the urine still containing sugar, Diet II should be given. If the glycosuria has been checked, then two ponos biscuits are allowed each day added to Diet III or IV, and later bacon, green vegetables, and custard are allowed at 1 p. m. to replace the meals at 12 and 2 p. m., and then Diet V is given. Diet V may also be used if all the diets suggested have failed to check the glycosuria, and this can thus be reduced in many cases. Diet V includes breakfast or coffee or tea, cream, eggs, or tomatoes or mushrooms, diabetic bread and butter; dinner of bacon, and one of the following vegetables: cabbage, cauliflower, Brussels sprouts, turnips, French beans, spinach, broccoli, boiled walnuts, asparagus, vegetable marrow, tomatoes, mushrooms, lettuce, cucumber, watercress, celery, radishes; custard, diabetic bread; supper of tea with cream, eggs or Welsh rarebit or cheese, one of the salads, lettuce, cucumber, mushroom, tomatoes, spinach, and suitable diabetic bread and butter. If all of these diets fail to check the glycosuria, sodium salicylate or aspirine should be tried in addition, giving about three grams of either daily. In some cases quinine salicylate in doses of about 0.2 gram three times a day is helpful. Fast days are also of some service, only tea, coffee, beef tea or whisky and soda being allowed. Even if these diets will not check the glycosuria, they are helpful in reducing its severity and holding it at a reduced level.

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In selecting a tonic it is highly desirable not to mistake stimulation for tonic action. Stimulation means unduly exciting the higher nerve centers, suddenly and often excessively elevating the blood pressure, and providing a quick but evanescent effect which rapidly passes away and is many times more harmful than beneficial. Tonic action means the gradual restoration of functional efficiency—"helping the body to help itself." Thus, Gray's Glycerine Tonic Comp. is a true tonic, with all the advantages and none of the drawbacks of a stimulant. To state it tersely, "Gray's" is an aid and a support to body functions—a genuine prop—not merely a spur or lash.

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"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see page——this issue) which is an elegant preparation.

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For the Clogged Liver.

When the liver does not act as it should, the zest of life departs, and the saying that "life and living depend upon the liver," although somewhat facetious, contains more than a modicum of truth. An engorged liver, of course, signifies that the organ requires active stimulation, especially when the condition is attended by manifestations of auto-toxemia. If any one fact has been more definitely established than another it is that such stimulation should not be brought about by the use of drastic cathartics, for if so, the remedy is frequently worse than the disease in its sinister effects. What is particularly needed is a means of stimulation which will satisfactorily increase the functional activity of the liver, without setting up catharsis or over activity of the bowels.

The above needs are well met by Chionia, an exceedingly effective and reliable preparation of Chionanthus Virginica. This well known product exerts a distinctly specific action on the liver and is probably one of the most efficient remedies at the command of the physician for stimulating the hepatic function. Administered in regular and appropriate dosage it increases the flow of bile, relieves congestion of the biliary passages, promotes digestion and although it cleanses the intestinal canal it accomplishes this without purging or griping.

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Prepare the Babies for Hot Weather.

During the month of June it is not a bad plan for the physician to take mental "stock" of the babies under his care, especially such as are bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those whose nutrition may be below par, so that they may enter the trying summer months in the best possible condition to ward off or withstand the depressing influences of extreme heat or the prostrating effects of the diarrheal disorders of the heated term.

Careful attention to feeding is, of course, a sine qua non and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hematologic standpoint. The marasmic anemic baby deserves special attention in the way of building up and restoring a circulating fluid which is deficient in red cells and hemoglobin. In the entire Materia Medica there can be found no direct hematic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic tonic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few weeks' treatment with appropriate doses of Pepto-aMngan very frequently establishes sufficient resisting power to enable the baby to pass through the hot summer without serious trouble, gastro-intestinal or otherwise.

Hypodermic Medication.

Hypodermic medication usually means emergency medication. When the occasion for it arrives, the physician, if he is to employ a tablet solution, is fortunate if he has tablets upon which he can depend. The failure of the tablet is his failure—he cannot shift the burden of responsibility. And tablets for hypodermic use, to be reliable, must possess a number of important qualifications. They must be true to label; they must be active; they must contain a definite amount of medicament; they must be soluble.

These thoughts were vividly impressed upon the mind of the writer upon the occasion of a recent visit to the hypodermic-tablet department of Parke, Davis & Co. Here we see hypodermic-tablet manufacture reduced to a science. Here we find tablet-making facilities that exist probably nowhere else in the world. The equipment is complete to the last degree. The department is spacious, light, airy, clean. It is supervised by an expert who has specialized for years in this branch of manufacturing pharmacy and who has selected his assistants with discrimination. Every worker is an adept. Every hand is schooled to its task.

In the manufacture of Parke, Davis & Co.'s hypodermic-tablets the components of the various formulas are weighed and reweighed, checked and rechecked by two experienced pharmacists working independently, one acting as a check upon the other, thus guarding against the possibility of error.

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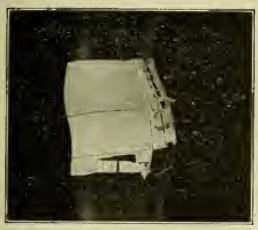

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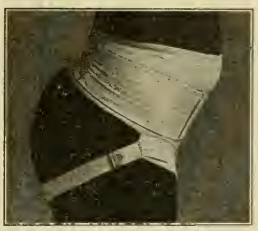

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Persistent Coughs and Colds.

Colds that linger invariably owe their persistence to inability of the body to exert sufficient resistance to overcome germ activity. Recovery, in consequence, is always largely a question of raising the general vitality and increasing bodily resisting power. To accomplish this, no remedy at the command of the profession is so promptly effective as Gray's Glycerine Tonic Comp. Under the use of this dependable restorative and reconstructive, the appetite is increased, the digestion improved, the nutritional balance restored, and the vital resistance so raised that the body can control infectious processes, and establish a safe and satisfactory convalescence.

In the treatment of colds, therefore, "Gray's" can be relied upon to raise the defensive forces of the organism and fortify it against germ attack.

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A Hot Weather Suggestion.

One of the difficulties attending the employment of cod liver oil in hot weather is its proneness to cause unpleasant gastric disturbances resulting finally in the patient's inability to continue with the oil. The best way to obviate this difficulty is to use Cord. Ex. Ol. Morrhuae Comp. (Hagee). This preparation is so palatable and acceptable that it does not give rise to the disagreeable effects of the plain oil or an emulsion, and may be used as freely during hot weather as during any other time. Furthermore, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is just as effective therapeutically, containing as it does, every property of the oil that is of advantage.

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The Treatment of Rabies.

The treatment of rabies is essentially preventive since there is no known cure for the disease once symptoms have developed. Rabies may be prevented, during the incubation period, in persons bitten by rabid animals, by prophylactic injections of attenuated rabies virus.

Harris' modification of the Pasteur treatment for the prevention of rabies is prepared by Eli Lilly & Company of Indianapolis. By means of this virus a high degree of immunity can be established in fourteen days, and by the family physician, doing away with the necesisty of the patient leaving home and obviating any loss of time and great expense.

The virus is the brains and spinal cords of animals dead from fixed virus inoculation. This virus is ground to a paste, frozen, pulverized and rapidly dried in vacuo. The powder is sealed in vacuo and stored in the cold.

The virus is supplied in syringe containers emulsified and ready for use. All that is necessary for the physician to do is to place an order with the druggist who will telegraph the nearest Lilly depot. The first three doses will be promptly available and thereafter one freshly prepared dose will arrive daily for eleven days, thus completing the treatment in fourteen doses, one daily. The dosage is standardized in units, the virus is nontoxic and the treatment free from complications.

An interetsing booklet on "Rabies and Its Treatment" will be sent to readers of this Journal on request made to Eli Lilly & Company at Indianapolis.

Packed in hypodermatic tablet vials, ten of Lilly's Iodine Tubes require very little space. One of these vials will fit nicely into a physician's tablet or syringe case; there is no danger of spilling or leaking and the tubes are always at hand when the site of a hypodermatic injection is to be sterilized. These tubes hold only a few drops of iodine—just enough for the purpose for which they are intended. Once a physician tries them they become a permanent adjunct to his hypodermatic outfit. To use the physician simply breaks both ends of the sealed tube and applies it to the site of injection. Lilly's Iodine Tubes are supplied through the drug trade in packages containing five vials of ten tubes each—fifty tubes altogether. Where more iodine is required for painting purposes Lilly's Ampoules of Iodine will be found very serviceable.

Treatment of Hay Fever.

Notwithstanding the many "specifics" and "near-specifics" for hay fever that have been pushed forward in recent years, the disease, if not precisely enigmatical, continues to baffle and perplex. It is evident that no single therapeutic agent has arisen that can eliminate, or even modify, the symptoms in all cases. Individual sufferers present problems that are peculiar to themselves, and other than the vasomotor relaxation of the upper respiratory tract, which is common to all, there are no uniform underlying changes.

Fortunately there are some very satisfactory alleviants. The suprarenal substance, in the form of its isolated active principle, Adrenalin, is undoubtedly one of the best of these. Experienced practitioners say that in a large majority of cases it successfully controls the symptoms. Adrenalin Chloride Solution and Adrenalin Inhalant are the preparations commonly used, being sprayed into the nares and pharynx. The former should first be diluted with four to five times its volume of physiologic salt solution. The latter may be administered full strength or diluted with three to four times its volume of olive oil.

Another agent of large promise in the treatment of autumnal hay fever is Ragweed Pollen Extract. Its use is based upon the generally accepted theory that this type of hay fever, with occasional exceptions, is due to the pollen of ragweed. An accurately standardized product is supplied by Parke, Davis & Co. It is administered hypodermically.

The Charlotte Medical Journal

VOL. LXXVI CHARLOTTE, N. C., SEPT, 1917. No. 3

THE ELIMINATION OF IGNORANT MIDWIFERY: EITHER ITS EDUCATION, LICENSURE, OR ITS SUPPRESSION.

By Mark T. Frizzelle, M. D., Ayden, N. C.

During a general practice of ten years' duration I have been convinced that the elimination of ignorant midwifery is a matter that merits the serious consideration of all thinking people. I have in that time seen enough of puerperal sepsis, puerperal eclampsia, unrepaired lacerations, infected eyes and infected cords to encourage me to accept this opportunity to advocate remedial measures in behalf of those whose health and lives are thus jeopardized. To the profession that has made such wonderful strides in the process of evolution as has marked the history of medicine in the last quarter of a century it seems rather inconsistent to permit the perils incident to the practice of incompetent midwifery to longer go unchallenged. When half of the confinements of the country are attended by women who know nothing of the principles which safeguard their patients; when statistics show that the results of the trained and educated attendant are far superior to the life and health of the nation than the results of the ignorant and untrained, there appears for the physician and social worker little else to do but to work for the eradication of the evil.

The institution of midwifery is as old as the human race. It antedates the practice of medicine by centuries. Over the masses of the world its dominion has existed from the beginning of civilization. Its high repute in ancient times is evidenced by the fact that Socrates' mother was a midwife. Its good repute in more recent times is indicated by the record that Queen Victoria was ushered into the world by a member of the profession. Its acceptable repute in most recent times is affirmed by the report that your mother and my mother were attended in deliveries by non-medical individuals. But, while it has been an indispensible factor in the accouchement of the human family and is thoroughly incorporated in its social fabric, in this age of practical application of scientific knowledge the present status of midwifery must yield to the advent of modern obstetrics.

Prior to the aseptic era there was but little difference between the midwife and the physician in point of service to the parturient woman. Perineorrhaphy was usually done by nature. The relation between the streptococcusl and puerpera fever and the relation between the gonococcus and ophthalmia neonatorium were unknown. The principles of hygiene, asepsis and antisepsis, so essential to the protection and care of the child-bearing woman and her baby, were unavailable. But with the dawn of that epochal era the physician, as a rule, awoke to the needs and possibilities of the times, while the midwife remained content in the tranquil dormancy of antiquity. There arose a rapidly increasing demand for preliminary education and for a higher degree of technical skill on the part of the physician. There became a law to require him to attend some reputable school of medicine for a definitely prescribed course. He must master the science of obstetrics while mastering the other branches of medicine. It is necessary for him to be licensed by a state board of examiners before whom he is required to prove in a general, final test that he has acquired a general and substantial knowledge o fteh science he has chosen to practice.

On the other hand the character of midwifery as exists today is the same, except in certain European countries, that has existed since the earliest times. As a class they are both dirty and ignorant, and in the basic principles of the art which they attempt to practice they are without any training whatsoever. They know nothing of hygiene; they care nothing of asepsis or antisepsis, and at their best they form truly a menace to civilization. Except in a very few localities any woman may follow the profession of midwifery unsupervised and unrestricted, no matter how deficient in education, training and experience she may be.

To my mind this anomalous condition is absolutely preposterous. "What is sauce for the gander should be sauce for the goose."

I need not tell you that 45 per cent. of the total blindness in this country is due to the lack of proper preventive measures at birth; that the homes for crippled children are filled with inmates

maimed for life as a result of ignorant midwifery; that the great majority of still births are due to faulty service of the attendants; that an untold amount of suffering and invalidism among the mothers of this country is traceable to ignorance and neglect during and following childbirth.

The Children's Bureau of the Federal Department declares that more women are dying between the ages of 15 and 45 in the United States from conditions incident to maternity than any other cause save tuberculosis. It states that since 1900 the death rate from tuberculosis, typhoid fever, diphtheria and certain other preventable diseases has been greatly reduced, while the available figures for the death registration area show no decrease in the proportion of mothers whose lives are yearly sacrificed in ignorance and improper care in childbirth. Hence it must be apparent to every intelligent person that the anomalous conditions which exists in this country is nothing less than disastrous to the birth rate, health and progress of our people. Its correction I regard s an imperative necessity. For if we are to prevent infant blindness and mortality and the various other calamities incident to maternity which we know may, in many instances, be prevented through careful and intelligent attention, we must have the work which is done by ignorant midwives done by trained and intelligent women.

Among a lrge class of persons who are otherwise fairly sensible there has grown up a feeling that the hazards incident to maternity are inevitable, that the mother must take a soldier's chance. I charge that those mothers who surrender their lives unnecessarily in this age do not surrender it any more to ignorance than they do to the amazing lethargy of the communities which fail to provide, or even attempt, suitable care of mothers. Is not the lack of agitation for a concerted movement for the betterment of our midwife conditions indicative of a concession by the medical profession and the laity that the present midwifery has a moral right, if not legally recognized, to remain in ignorance and incompetency as one of our civilized institutions? Shall inadequate midwifery live because of the inability of the poor to pay for efficient service during parturition? Cannot the state provide suitable service in such cases as an insurance for living, healthy mothers and living, healthy children? There can be no better economics for any commonwealth than that obtained by providing suitable service ,free or at a nominal cost, to those unable to pay for it. For healthy mothers and healthy babies are an asset to the state, whereas sickly ones are a liability—a serious drain to both life and happiness—and dead mothers and dead babies are a dead loss. Whenever a midwife is not as capable as a well-trained obstetrical attendant her service is costly to the state if cheap to the individual. Bad obstetrics means a high mortality rate; it means chronic ailments incapacitating, often, for life; it means needless, if not criminal, blindness.

In the practice o fobstetrics the usefulness of measures to guard against impending disasters is second to no other branch of medicine. Prenatal instruction, such as teaching mothers how to care for themselves and their unborned infants, is the buoyant spirit of prophylactic obstetrics. The practical value of such teaching has been demonstrated by the work of visiting nurses, carried on under the auspices of nurse associations, hospital social service bureaus, health departments and other agencies. The few available statistics on this subject indicate that the deaths among infants and mothers who have had prenatal care and instruction as to the hygiene of their lives are approximately 50 per cent. less than among unsupervised and untaught mothers in the same class of society. In their present state of unenlightenment we cannot look to our midwives to do this important work. Can we ever expect these women who, as a rule, are old, ignorant and superstitious to be instrumental in doing prophylactic work? The time must come when every woman shall have care during her pregnancy as surely as she shall secure it at the time of her delivery. Perhaps the strongest argument in behalf of the abolition of incompetent midwifery today is that its practice is not in accord with modern tendencies of medicine, where prophylaxis is the watch word and where preventive medicine is the battle ground on which the physician must achieve his greatest victories.

Believing that prenatal endeavor is the cornerstone of life, numerous women's leagues for social service are doing extensive prenatal work throughout the country. Employed by these agencies are corps of well-trained nurses whose duties are to keep by frequent visits close observation of expectant mothers, and, on the development of unfavorable symptoms, the patient is sent either to some hospital or to her family physician. No more than ten days are permitted to pass without a visit by the nurse and in case of threatened trouble the nurse goes as

much oftener as is necessary. There is given advice with regard to clothing, exercise, fresh air and diet. In the lines of medicines she may prescribe laxatives only. In thickly populated communities one nurse has been able to care for over 1,000 patients in this thorough way. During the existence of some of these leagues the percentage of cases of threatened puerperal eclampsia has decreased from 10.5 per cent. to four-tenths of one per cent. The percentage of miscarriage has become very low—only two-tenths of one per cent. as against the average of fifteen per cent. rPemature births have decreased to 1.21 per cent. The average length of time the patients are under the care of the leagues is three months, but every one encourages and prefers having them as early after conception as is possible. The cost of this care has been from $2.50 to $3.00 per patient, and the patients in many cases are encouraged to pay this themselves, knowing that a self-respecting person is a much more useful citizen than a dependent one and that a self-supporting organization is much more valuable than one carried on by charity.

The process of elimination of the ignorant, sloven and unfit from the ranks of midwifery has been going on in Europe for several years. There, as here, the profession is deeply rooted in its civilization and its immediate eradication for traditional and social reasons was found infeasible. While unable to abolish the institution at the present time it has felt the necessity of minimizing the danger to the public by making provision for the training, superivising and controlling of midwifery by government authorities. Germany, Holland, France, Belgium and Italy require and give a full two years' course of training to their midwives; Norway, Sweden and Denmark one. They are carefully trained by the respective governments in well-established clinics, usually by university professors. All are rigidly examined before licensed to practice and their duties and limitations are by law clearly outlined.

In 1902, England, by the establishment of the Central Midwives Board through an act of Parliament entitled, "An Act to Secure Training of Midwives and to Regulate their Practice," announced to the world that she had joined the ranks of those nations which were considering the midwife problem to be of national importance and would henceforth strive to give to her women at the supreme moment of childbirth all of the protection and care that modern, scientific methods of midwifery afforded. The high standard sought for the training and examination of her midwives has resulted in the elimination of the uncleanly and incapable and secured for the profession a higher class of women. She now has well-trained graduates of standardized schools of midwifery, and numerous nurses are beginning to recognize the reputableness of the institution or profession as manifested by an increasing number annually entering into its service. In England the Central Midwives Board is invested with supreme authority in matters pertaining to the training and licensing and supervision of midwives. The training required is given by institutions recognized by the board as instructing schools for midwives and no woman can practice the profession without first having a diploma from one of these recognized training schools, a certificate as to her moral character and a license issued by the board. The board has established rules by which England's midwifery is governed and those rules are enforced in every community through the agency of local supervising authorities which are the counties of the country.

In America several states have begun a movement for the improvement of their midwifery conditions. New York was the first state to establish a school for the training of midwives and so far as I know is the only state in this country that has a school for this work. It gives a 6 months' course of training to its students. Other states, however, are showing an unmistakable unrest and dissatisfaction with the evils of present conditions and in a comparatively short time there will be similar schools in operation within their own boundaries. The same humane progress must eventually be taken by our own state and let us hope that our commonwealth will not be slow in awakening to the spirit of the times and institute this reformation so vitally needed for the welfare and progress of our people.

But in America the problem presented by the exigency of midwife reformation appears on study to reveal conditions more complex than were found in Europe. The execution of any educational plan depends largely upon the material with which we have to deal. The education of previously ignorant and untrained women to be efficient midwives in a course of a few months' instruction is impossible. In Europe compulsory education has elevated the mental capacity of the masses, from whom the candidates for the practice of midwifery evolve, which enables the system for the better-

ment of their midwives to be more successfully operated than in the states of America where educational requirements and attainments are comparatively insignificant. Here only the most intelligent midwives and graduate nurses from training schools of good standing are capable of becoming in a few months' course of training safe and efficient attendants upon cases of normal labor. Upon this class and upon this class only could we depend for a realization of their limitation and for promptness of calls for professional aid in cases of emergency.

But the great end of this reformation is the elimination of all midwifery. If obstetrics has any right to a place with surgery, gynecology, pediatrics, etc., if its correct practice requires the wide knowledge nd the skilled technique of the educated physicin, if modern science has placed it on a co-ordinate plane with the other branches of medicine, the proper solution of the midwife problem is not, after all, her education, but her total extinction. Improve her as much as you can; train her as her capacity will permit; but never forget the great end to be attained is her complete abolition.

Immediate legislation is needed. There should be a state law investing the State Board of Medical Examiners with authority to regulate all midwives practicing within the state. Such a law is needed to control the situation until the midwife is made a superfluity through the education of the masses to good obstetrics. The state must have facilities for training and educating its midwives; it must have provision for examining and licensing them; and they must be supervised and controlled by the government if mastery of the situation is to be obtained.

In any process of reformation, no advance can be made without strong public opinion, and to create this it is necessary to know the facts. A campaign of publicity which shall educate the lay public as to the deficiencies of present day obstetrical practice and the need of reformation must be instituted. Just so soon as women learn that their safety in childbirth depends upon having trained, skillful care, just so soon do they seek the service of the educated, well-trained physician at this time. Once they have seen at work an excellent obstetrical attendant, the preparation of the patient and bed, the painstaking cleanliness, the use of sterile rubber gloves, the care of the baby's eyes, etc., an object lesson has been received that makes them forever dissatisfied with careless, dirty work in confinements. This will require conscientious effort by physicians and social workers to let every family know the benefits of good obstetrics and the possible harm of faulty accouchement to interest the masses to make the change. It will behoove every physician to do his best in a conscientious effort to raise the standard of obstetrics to a higher plane that it may be accorded a greater respect than at present received. Each mismanaged case lessens the public's confidence in our ability to do creditable work and frunishes an excuse for the existence of midwives. On us as physicians, therefore, rests most of the responsibility for the enlightenment of the people and the provision for the proper care of all pregnant women.

In country communities there should be a gradual abolition of midwives by the substitution of visiting and obstetrical nurses; in cities there should be the same gradual extinction by the replacement of obstetrical charity hospitals with the obstetrical visiting nurse feature incorporated. In both municipal and rural communities a vast saving of foetal and maternal life and health can unquestionably be effected by developing an obstetrical visiting nurse system and by educating the poor to make more extensive use of obstetrical charity institution instead of relying on the poorly trained or untrained midwifery. Poor women in fairly well-conducted hospitals usually receive as good care, and often better than the well-to-do in their own homes. Foster such agencies as women's league for the betterment of social conditions prenatal nurses' associations, maternity hospitals for the poor in and near our cities and other similar organizations or institutions and we shall erase from our civilization the besmirching blot of an antiquated, dilapidated, and perilous system of ignorant, filthy, and incompetent midwifery. Disseminate the full fact throughout the state regarding proper obstetrics, educate the general public to understand why every pregnancy should both for the interest of the state and for the good of the family, be supervised, labor scientifically conducted—neither of which can be accomplished by non-medical attendants—and the people of the state will, in one way or another, place the means of obtaining modern obstetrical service at the disposal of all communities, and then, with or without law against the midwife, she will disappear

from our rural and municipal vicinities, and become, like chemistry, witchery and slavery, a relic of the past ages of ignorance.

RELIEF OF STRANGULATED HERNIA IN THE CHINESE. SEVEN CASE REPORTS.

By W. B. Russell, B. S., M. D., Soochow Hospital, Soochow, China.

During the seventeen months from May, 1915, to October, 1916, and also three weeks preceding this meeting 29 cases of inguinal hernia entered the Soochow Hospital for treatment on my service. Three refused operation and of the 26 operated all were discharged cured save the last two who are making satisfactory progress and reported here along with four strangulated cases of former series and one extra case of fecal fistula due to strangulated inguinal hernia. May I digress by saying just here I was constrained to write and report to you these cases by reading a paper by Dr. John Van Duyn of Syracuse, N. Y., U. S. A., "Relief of Strangulated Hernia," Archives of Medicine, June, 1883, giving a study of five cases of strangulated hernia, treated by operation with five cures. He says they did not use the carbolic spray but that his fingers and those of his assistants and all instruments and dressings (only new) were prepared by washing and soaking in 1-20 carbolic acid and that the hands of assistants were in no case allowed to come in contact with the wounds. He says that in none of his five cases had extensive manipulations been made at reduction and gives this fact as the main factor in his success. He condemns violent efforts at reduction and further says, "We are forced by observation and statistics to believe that it were far better if taxia had never been taught."

Etiology.—Heredity plays a considerable part in hernia and none the less in inguinal hernia. None of our strangulated cases, however, have been congenital and we take it to mean that congenital cases do not easily strangulate because of larger opening into sac allowing free and easy reduction of contents. In our small series there has been found the history of an old acquired hernia which somehow just failed to go up this time. It would seem that a larger percentage of our cases coming to operation in China are strangulated than at home. In our cases about 25 per cent. of those coming to operation are strangulated. We should be very glad to know what has been the experience of others in China.

No one who has seen patients with several days intestinal obstruction from strangulated hernia will doubt what course they will take without operation and one will not be inclined to split hairs over the difference between incarceration and strangulation at least until after operation. These are desperate cases and must usually end in death without operation except in rare cases where fistula may possibly give relief. Some textbooks give elaborate instruction for the reduction of strangulated hernia which may be successful in a certain number of cases but will factor largely in mortality statistics and we believe should be condemned. None of our cases so far as we could find out had been so unfortunate as to have any extensive efforts at reduction and we do not hesitate to say that fact was contributory to success in our cases.

The rational treatment of inguinal hernia is by operation and in strangulated cases we wish to add ocnservative operation for a living patient with a fecal fistula, is to say the least, more desirable than a dead one with a brilliant resection. We shall proceed at once to the report of cases as further points of treatment will be brought out there.

Case No. 1, Hospital No. 1485, male, age 70; farmer; Christian member of Methodist Church, full of faith in God but little in doctors. Entered hospital Sunday, November 21, 1915, 11.00 a. m. with strangulated right inguinal hernia of seven days' standing and was operated at 1.30 p. m. Ordinary Bassini incision.

Case No. 2. Hospital No. 1644; male, age 57; merchant. Entered hospital Christmas day, December 25, 1915, just before noon and was operated on at 2.00 p. m. same day for strangulated right inguinal hernia very large of four days' standing. Incission was made over upper part of tumor down to fibres of external oblique which were divided from above downward to the tightly constricting external ring which was carefully divided with Mayo dissecting scissors, sac isolated at internal ring, opened and contents consisting of coils of small intestine and omentum in fairly good condition so were returned to abdominal cavity; sac tied off and disposed of after method of Macewen and wound closed by Bassini method without drain. Patient was put to bed in moderate Fowler's position, proctolysis of normal saline; temperature went to 100.8 after operation. Convalescence uneventful and patient was discharged January 10, 1916, cured.

Case No. 3. Hospital No. 1065; male, age 23; farmer. Entered hospital August 4, 1916, in forenoon from Dr. Park's special clinic with diagnosis of right inguinal hernia strangulated two days. Enema of soap suds was ordered feces from which were found negative, also urine negative. At 2.30 p. m. patient was operated under chloroform. The following notes were taken by the Chinese male nurse at my dictation: "Strangulated light inguinal hernia, strangulated at internal ring which had descended past external ring. Ordinary incision down through external ring, then constricting internal ring showed an opening a very large sac, that contents consisting of ileum and its mesentery were black and almost gangrenous. Two and one-half feet of ileum and its mesentery were removed after failure to restore circulation during time the large sac was being dissected out of scrotum, they having been kept wrapped in hot saline gauze. Large lateral anastomosis was made, ends of gut being closed with Purse string of cat gut and Lembert sutures of silk. Wound closed Bassini method with large cigarette drain down to line of closure of mesentery." Patient after operation was put in moderate Fowler's position and given rectal feedings every five hours with three hours of conuous saline proctoclysis between, etc. After a satisfactory convalescence patient was discharged September 4, 1916, cured.

Case No. 4. Hospital No. 1265; male, age 45; farmer. Entered hospital August 31, 1916, with diagnosis of strangulated right inguinal hernia of 43 days' standing. Patient was seen in Dr. Park's clinic two days before entrance and told he would die if not operated when he said, "I knew it." But Dr. Park told him I was away and would not arrive for two days when patient said, "Well I suppose I can wait two more days as I have waited forty and am not dead yet." At operation the large right side of scrotum looked slightly inflamed and when opened a sloughing mass of omentum with as expected no intestine was found firmly constricted and adherent. Mass was freed, resected and tied off and returned to abdomen, large drainage tube introduced into abdomen and a smaller one into scrotum through a stab wound and patient put to bed in Fowler's position no effort having been made at closure of wound, until September 26, 1916, when it had cleaned up, so was sutured and healed kindly. Patient discharged October 8, 1916, cured.

Case No. 5. Hospital No. 474; male, age 23; farmer; mother dead and he the only son of his old father. Entered hospital May 13, 1915, with very repulsive condition due to an old fecal fistula in left groin through which the larger part of his feces were passing. The following history was secured from the father. At three years of age hernia was noticed in left inguinal region. At fourteen it strangulated and scrotum reupturned and intestine sloughed with discharge of feces. Said, later some healing took place until there was only a fluid discharge until two years before entering hospital when opening broke down and feces had continued to date. On examination we assured them there was hope but that they must remain in the hospital until skin could be cleared up and the patient gotten in better condition for operation. Fecal examination negative. Patient was very impatient for operation which could be postponed no longer than 21st when we opened abdomen in midline and began working out this Chinese puzzle which to make a long story short we finally solved. Did a lateral anastomesis and had the patient off the table four hours later. Patient was given as little chloroform as possible and was given intravenous of normal saline before leaving table. Following operation we used Fowler's position, continuous proctoclysis of normal saline, rectal feedings and stomach lavage with stomach tube as patient had dilatation of stomach. Patient's temperature went as high as 100.4 but he made a satisfactory convalescence and was discharged July 3, 1915, cured. Have seen patient and the old father since and they are both very happy over result.

Case No. 6. Hospital No. 2102; male, age 52; fisherman; member of Catholic Church. First noticed pain in right groin one year and seven months ago and felt faint so went to bed, took some opium and got relief. Since then the hernia has come down several times but each time he said he would go to bed take some opium, elevate the foot of bed, vomit there or four times and then it would go up. Patient entered hospital December 28, 1916, at 4.30 p. m. and I saw him a few minutes later and found him with strangulated right inguinal hernia of five days' standing. When I asked him what he had done he said he had used his usual procedure above, outlined to no effect so as I had operated and relieved his friend also a Catholic and a fisherman with incarcerated hernia he thought I might help him. I asked if he had tried to manipulate it, when he exclaimed, "No! That would hurt! I followed his method, had

the foot of the bed elevated and gave soap suds enema with large bowel movement and then had saline enemas given hoping to get patient in better condition for operation next day. Next morning when I saw him he said: "It went up at 12.00 o'clock last night." Well, I said, you are out of danger. He said but I want you to operate so it will not come down again. We operated at 2.30 p. m. same day and found sac of small size and empty save for a small piece of adherent omentum. This was freed, tied off with cat gut and returned to abdomen. Sac disposed of after method of Macewen and wound closed without drain by usual Bassini method. Convalescence has been uneventful.

Case No. 7. Hospital No. 9; male, age, 31; farmer. Family history negative. Says first noticed trouble in right groin ninth moon last year, when he was weak from over-work. Went to bed and after about two days got relief. It had not failed to go up if it had come down since then until twenty days before he came to hospital. At that time he was doing some heavy lifting in connection with a corn mill when it came down and had not yielded to treatment of the native practitioners these twenty days but they said if they could just get his bowels to move it would be relieved. Patient said he came to us as soon as his doctors admitted they did not understand his trouble. Patient's companion said patient had been vomiting feces for sixteen of the twenty days. When he entered hospital January 4, 1917, at 5.00 p. m., almost pulseless with temperature by mouth 95 he certainly did look woebegone. Was put to bed with hot water bottle, etc., nothing ordered by mouth, soap suds enema returned with large stool when salines and rectal feedings were started and kept up until operation the following day at 2.30 p. m. Under ether and 1 per cent. cocaine locally ordinary Bassini incision was made down to external oblique when constriction was found at external ring opened with curved Mayo dissecting scissors small sac isolated and opened to find blackened almost sloughing knuckle of small intestine together with a small piece of omentum which by its presence had prevented complete strangulation and thus saved patient's life. The adhesions freed intestine wrapped with hot saline gauze while the small sac should be dissected out. Blackened loop of intestine was found bleeding which seemed impossible to control but finally covered the abrasions with omentum and returned same to abdomen as resection seemed out of the question owing to patient's exhausted condition. Large cigarette drain was introduced through stab wound in peritoneum, sac stump disposed of after manner of Macewen and wound closed by usual Bassini with drain coming out near middle of wound. At close of operation patient received 800 c. c. of normal saline intravenously and was put to bed in moderate Fowler's position and rectal feeding ordered every five hours with continuous saline prostoclysis three hours of interval. Rectum was widely dilated and relaxed so this was difficult, but successful. Hot water was allowed by mouth following day and next day liquids. Drain changed to rubber tube seventh day and removed entirely on eighth day and soft diet ordered. Wound in fine condition. Convalescence slow but satisfactory.

(Later) Later points in after-treatment are, that night of 8th day during which patient had soft rice and a dose of castor oil with bowel movement reported, patient began to get worse symptoms pointing to possible perforation in bowel that had been returned to abdomen at operation. Family were sent for at once with hope of operation but patient died afternoon of ninth day. Father-in-law came a few hours after and post mortum was promised and consent of magistrate secured but just then wife arrived and refused absolutely, so blocked us in our efforts to find out real facts in etiology of patient's death. I neglected to say above that patient had been a heavy drinker.

We feel now we either should have deliberately produced a fecal fistula by incising knuckle of gut and leaving it until patient got in better condition or proceeded to the resection of the knuckle of gut where spacelation had gone so far as to injure veins so that hemorrhage could not be controlled except by covering same with omentum.

In concluding, we desire to emphasize the wisdom of Dr. Van Duyn's words of 34 years ago which we quoted in our first paragraph and urge that time be taken with all our uncomplicated hernia cases to make them understand the dangers of paliative treatment and to explain to them the ease and practicableness of operation with cure. In case operation is refused explain to them that they should come to a surgeon at once in case of strangulation as in this condition early operation where no manipulation with force has been used can be done with almost no mortality. We urge careful examina-

tion of these cases as the condition may be confused with hydrocele, etc., as Chinese have same name for a number of conditions in this region.

A PLEA FOR AN EARLIER DIAGNOSIS IN TUBERCULOSIS.

By E. O. Abernethy, M. D., Chapel Hill, N. C.

So much has been said and written about the early diagnosis of tuberculosis one is tempted to apologize for presenting the subject unless especially trained in this line of work, but when we remember that hundreds of cases of pulmonary tuberculosis in our State escape recognition until extensive destruction of lung tissue takes place, such a discussion is not out of place. I have selected this subject because of a firm conviction that many of us are not as careful as we should be. The charge made against the profession at large by Thompson a year ago was harsh, but not as unfair as some of us thought at the time.

Failure to recognize tuberculosis in its incipiency is not confined to a few, but practically to all practitioners. The cause of this failure is readily understood. A large per cent. of our population has tuberculosis, many presenting to the trained clinician a mere shadow of the disease, often inactive, which, if not properl yrecognized, may remain latent, or, as is liable to occur in a large majority of cases under proper environment, insiduously develop into a rapidity destructive type.

Early diagnosis is not as difficult as was once thought. A little more care, a more painstaking investigation, always putting the patient on the defensive, will frequently bring out the lesion.

I may be pardoned for reviewing the salient points in the diagnosis, not that any of us are ignorant on the subject, but to arouse anew our interest and stimulae us to greater activity in this important work.

1st. The family history. This, to be of value, must be complete in detail, followed by a personal and a clinical history. A history of tuberculosis in the patient's family should carry weight only as regards exposure and direct contact. This is particularly important if the exposure occurred during childhood or the growing period. The most careful observers now believe that tuberculosis is a disease of childhood, followed by a period of latency and flarring up in adult life. Hence, one should learn if the old grandmother or grandfather, as well as the parents, had a cough, or if the old nurse had chronic bronchitis. Living conditions of the patient, from early childhood, should be carefully investigated. Fresh air and ventillation are modern ideas, and the present generation of young adults have been reared under environment favorable to the development of the disease. This is true in the country as well as in the tenements. We recall the reply the city man made to his country neighbor who was boasting that the country air was so much purer: "Why shouldn't it be; you never use any of it." The conditions under which the patient has worked are important; over-crowded workshops, poorly ventilated school rooms, scanty and improper nourishment, and mental worry are important factors. The occurrence of infectious diseases, especially whooping-cough, measles and la grippe should be given proper weight in the considerations.

2nd. The clinical history. This in itself is diagnostic. The prominent features, quoting Durell are: "Elevation of temperature; instability of the pulse, with slight disturbance in the respiration; digestive derangement; lowered blood pressure; chilly sensations, with slight night sweats; loss of weight, with afternoon depression, languor and fatigue; localized pains in the chest and back; hemoptysis; and hacking or pronounced cough, with or without expectoration."

The temperature is the most significant of all clinical symptoms and should be taken over a period of seven days at two hour intervals from 7 a. m. to 9 p. m., the thermometer being allowed to remain under the tongue for five minutes. The rnge of temperature is from 97 to 98 degress in the morning to 99 to 100 or 102 degrees in the afternoon, usually reaching the highest point between 2 and 4 p. m. Cases are reported in which the temperature range is reversed, being highest in the morning. These cases are said to do badly. The relation of pulse to temperature is very significant, the pulse often ranging as high as 100 to 120, with the patient in bed. This disproportion between pulse and temperature is one of the most valuable aids in the diagnosis. The relation of meals, emotions, exercise and the menstrual function to the temperature should be noted.

Cough, which has been stressed by the laity, is a variable and deceptive symptom. I have seen patients with far advanced tuberculosis without a history of cough. A hacking cough is often present in the morning. Clearing the throat

*Read before the Sixth District Medical Society, Raleigh, N. C., Aug. 20th.

without coughing is suspicious.

Hemoptysis. Raising blood from the upper air passages is practically always a symptom of tuberculosis. This statement, made so repeatedly by clinicians, bears frequent repetition, for it is often the earliest and only suggestion of the disease.

The examination. It is here we slip. But we are improving. The time has long past when the thoughtful physician makes a chest examination through even a gauze undervest. To make a chest examination of male patients failure to remove the clothing to the waist is criminal, and, with a little tactful handling of female patients, one seldom meets any objection to the bared chest. A sheet or towel properly draped solves the problem.

The first essential in a chest examination is time. If one is in a hurry one had best select a more favorable opportunity. The details of a physical examination are so familiar that one hesitates to refer to them, and yet, I have been appalled by the number of fairly well-to-do patients I have seen with moderately advanced tuberculosis which had been diagnosed malaria, la grippe, bad cold, and most often "a run down" condition. In the work of the University Summer School, with patients from every part of the State, I have had excellent opportunity to witness these conditions.

Inspection will show atrophy of the muscles over the affected lung. Expansion will not be as good on the affected side, especially if there has been a concurrent pleurisy. Great stress had been placed on what is called the "lagging of the diseased lung," on deep inspiration. This lagging is a valuable sign in incipiency.

Palpation to any but the trained diagnostician is negative. This can be said about percussion in most instances, unless there is an aglomeration of the tubercles. However, with practice one may cilitate a difference in the percusionshdd clicitate a difference in the percusion note on forced respiration, and the limits of expansion may be determined by a comparison between the percusion note on deep inspiration.

Auscultation is the sheet anchor in the examination. It is well to remark here that one occasionally meets a physician whose ear has been so carefully trained that the stethoscope is unnecessary, but I confess I need one, and am often in doubt about what I hear. By having the patient breathe normally, going over the entire lung, one can detect alterations in the respiratory note. This procedure should be repeated, having the patient breathe deeply. It is always necessary to allow periods ofrest to prevent tiring. Feeble, harsh, rough breathing, granular respiration, and wavy (or intermittent cog-wheel) respiration can be noted. Medium and large moist rales are not found in incipient cases, but fine moist or dray rales are present. These are best brought out by having the patient cough once or twice on expiration, then inspiring deeply. The presence of crepitation under such circumstances is sufficient to refer the patient to the specialist. These rales and crepitation are usually found posteriorly along the inner border of the upper half of thescapula, and less often in the upper lobe on the right side. Evidence of lesions anteriorly indicate a more addanced condition.

Repeated examinations are often necessary, considering the family, personal and clinical history, and laboratory findings (which are so often negative in the early stages). The von Pirquet skin test is very valuable in children, but in adults does not distinguish between beginning and healed lesions. A negative von Pirquet, after at least three trials, eliminates tuberculosis.

As I said before my object in discussing this important subject is to arouse anew our interest. I have seen in the last few years a goodly number of active, well-educated, useful members of society who have been allowed to drift along until hopelessly ill, and all of them through the hands of excellent men—city practitioners, village practitioners, and country practitioners. These people have gone to a hopeless advancement not because we cannot make the diagnosis, but because we will not make it. I do not agree with Thompson that we do not know how to make the diagnosis, but prefer to think we have been lax in our efforts. We are fortunate in this district in being near the State Sanatorium. I have had opportunity recently to observe the work at the Sanatorium and have been greatly pleased at the scientific and thorough methods employed. When we are in doubt those in charge of the Sanatorium are always glad to help without price or publicity. I wonder how often the early diagnosis is not made for fear of hurting some one's feelings. It is at least honest to give our patients the benefit of the doubt, and if we are unable to make a negative diagnosis, pass the patient along to the specialist.

THREE INTERESTING EYE CASES*

By James M. Parrott, M. D., F. A. C. S., Kinston, N. C.

Case 1.—The first case which I desire to report and discuss is that of a Morgagnian cataract. In one of the two changes which takes place when a cataract becomes hypermature the cortical substance liquifies and the nucleus retaining its original form gravitates to the lowest part of the capsule so that the capsule in effect becomes a bag containing a semfluid which is milky and calcareously infiltrated. I shall not discuss what might take place following these changes only pausing to say that cataractica membranacea eventually forms.

When this case presented itself, now eight or ten years ago, I had not seen such a hypermature cataract, however in justice to myself I will say that I "suspicioned it." I now see no reason why it can't be recognized fairly easy by all well posted opthalmologists, if on guard.

The condition is determined by irregular lense color, shining white bodies sprangling in various directions in a more or less structureless or milky like flud, plus a trembling iris.

I usually prefer the combined method for cataract work applying the idea that it is not so much the method as the man and that one should choose the procedure which suits one best and stick to it—one method mastered is far better than two partially learned. Nothing unusual occurred during the operation until I reached the third stage. When I cut the capsule with the cystome I was literally astounded at the large amount of fluid which gushed into the anterior chamber and out through the corneal wound. I warn the inexperienced not to be disconcerted by it. Fortunately in my case the capsule was not unduly thickened and I had no trouble with it afterward. I completed the operation as usual minus lense delivery, of course. The patient made an uneventful recovery and was reading news print with the proper lense when last heard from.

Case 2.—The second case which I desire to report is also a case of cataract which unfortunately was followed by expulsive hemorrhage. The operation was one of the most perfect I have ever done and was also a perfect failure—perfect failure not only failing to restore vision but worse, the loss of the eye ball.

The patient was a man about sixty-five years old with atheromatous arteries. However the blood vessels were not more degenerate than others on whom I have operated very successfully for cataract. Several hours after completing the operation at the termination of which I remarked to the chief assistant "That is the best cataract operation I have ever done," the patient while lying quietly suddenly began to complain of severe pain. The nurse at once noticed blood oozing from under the dressing and called me. The hemorrhage was really profuse and in spite of my best efforts oozed for several hours. The eyeball collapsed and the eye was lost.

It is supposed that the hemorrhage in these cases comes from choroidal or retinal blood vessels which being atheromatous rupture when the intraocular pressure is removed. I am sure such a misfortune cannot be foreseen. The possibility of such an ending should be kept in mind and the patient warned as to it before the operation. It is very, very rare and many men with years and years of experience have never seen a case. Beard in his work on Opthalmic Surgery says, "He in whose practice it has never occurred has much to be thankful for the writer is one of these lucky individuals, for with a total of more than twelve hundred extractions and a still greater number of iridectomies, he has yet to meet with this catastrophe." In a foot note he says "Since writing the above I have had two such accidents—one forty-eight hours after an extraction, the other immediately attending an iridectomy for glaucoma."

Case 3.—A physician who knows how to interpret correctly the complex symptomatology of malaria is an expert diagnostician, a physician who knows the dietetics of typhoid fever is a master dietitian; a physician who knows the pathology of syphilis knows ll pathology; a physician who can always recognize the distal effects of local infection is a past-master as a clinician.

It is impossible all too often for me to recognize distal effects and I am sure you will pardon me for suggesting that most of us very, very frequently fail to do so. However I was fortunate in doing so in case three which I wish to discuss. I do not think I have ever labored harder on any case in making a diagnosis than on this one.

Not only did I learn much about my professional work from the study of this patient but I also had the pleasure of confirming my opinion of what a twentieth century specalist ought, namely not

*Read by invitation before the Onslow County Medical Society, August 16, 1917.

a one idea fool, but a broad viewing man who understands the relationship which exists between various organs and tissues of the human body.

I believe that a specialist should be a good general diagnostician and should be in a position through proper assistants, of course, to carefully study the various organs and pathogenic changes in them. He should appreciate that all headaches are not due to an error of refraction and he ought to be capable of determining to what organ or pathogenic condition to lay the blame. Co-operative team work is very important and will be more so tomorrow. It is pressing for the best study of the profession. Our people are not able to bear the expense or to spare the time needed for going from specialist to specialist to find out the cause of aching joints. The oto-rhinologist should be enough of urologist or else have the services of a urologist in his corpse of workers to determine whether the nervousness, melancholia, etc., is due to accessory sinus or renal infection. We have adopted this team work in our hospital and office. The combined work of our roentgenologist, our urologist and our microscopist and our special organ specialist together with our internist has proven very satisfactory both to us and so far as we know to our patrons. Case three which I now report clearly illustrates the value of this co-operative work.

Case 3.—Large man forty-eight year old.

Family history negative. Personal history interesting so far as this discussion goes only because of previous history of two or three attacks of gonorrhea from which he had suffered several years before. Aside from the venereal infection his health had been good until about two years before consulting me, and when seen by me he appeared on inspection to be a perfect specimen of manhood. He was suffering with an attack of what had been diagnosed iritis. Parenthetically let me remark that I view a diagnosis of iritis just as I would a diagnosis of fever. It is all right as far as it goes but it does not go near far enough. In my opinion we should give our diagnosis a name which would convey something of the etiology and pathology of a disease. When we remember the very intimate relation which the iris bears both anatomically and physiologically to the other organs composing the uveal tract, that is the ciliary body and the choroid, and when we realize that the iris never becomes diseased idiopathically the wonder grows that we ever heard of iritis as a disease.

Continuing the discussion of case three, I decided he had an attack of iridocyclitis due to a pyelitis probably of gonorrheal origin. A general analysis of the case is interesting. The symptoms of which he complained and those presented by an eye examination were such as are usually met with in so called iritis so we pass to the consideration of the distal findings. Heart, lungs, liver, spleen, digestive organs, accessory sinuses, antrum of Highmore, nose, throat, and ears normal and dental sanitation good. No peripheral infection foci found. Blood pressure 210. Hemoglobin 100 per cent. No arterial sclerosis noticeable, though he had had a slight retinal hemorrhage in this eye two years before, without apparent cause.

Microscopical study:

December 16, 1916: Urine straw colored. Sp. Gr. 1.028. Reaction acid. Albumen present. Bile none, acetone none; indican, no excess; casts, none; pus cells present; bacteria, diplococci and staphylocci.

Blood: R. B. C., 4,165,000. W. B. C., 10,500. Luetin reaction negative.

December 17. Urine: Reaction acid, small amount albumen few pus cells, staphylococci, uric acid crystals present. Blood: R. B. C., 5,000,000. W. B. C., 10,000. The following day examination showed no staphylococci but diplococci were observed and only a trace of albumen.

This patient improved gradually so far as the eye symptoms were concerned. The treatment consisted of rest, purgatives, sweats, large volume of water, hexamethylenamine and salicylates, (salicylates were good for our fathers and they are good for me). Atropine was used in the eye and the patient kept in a dark room. Opiates were used to relieve the unusually severe pain. I have seen this patient once since suffering with a similar attack and treated him in a similar manner except I did not use atropine and I think its non use was beneficial.

This case is usually interesting t o me as an illustration of the distal effects of local infection—an eye case from a diseased kidney.

Osmond of Cleveland in an unusually interesting paper entitled, "Relation Between Systemic Disease and a Focus of Infection in the Upper Air Passages," which was recently published, divides distal and local effects into three classes. "First, active inflammation, which is purely local or may be the advance guard of one of the diseases of childhood such as scarlet fever and measles" (such as

rhinitis ushering in influenza). "Second, a chronic condition which represents a secondary lesion of a systemic disease" (as a tuberculosis lesion of the nose secondary to pulmonary infection). "Third, an occult stagnant condition, which when well uncovered represents the principal focus of infection in several systemic diseases" (illustrated endocarditis due to pus pockets around teeth or pus in the nasal accessory sinuses and particularly arthritis when caused by streptococci veridans).

This classification strongly appeals to me and when remembered keeps one on guard as to probable cause or causes and hence is of much aid in diagnosis, treatment and case management.

The case which I have just considered properly belongs in division three of the above classification. The prognosis in this case is not very favorable because of the difficulty of treating the pyelitis. When we learn to cure such kidney infection I shall hope to cure (permanently) such cases as case three and until then he will have to expect recurrences of these attacks.

PHYSICIANS AND HISTORY.

By Carroll Kendrick, M. D., of Kendrick, Miss.

It is well known to all close students that true Southern history has never been written. Especially is this true with reference to the medical profession. Great achievements by noted Southern physicians and surgeons have been almost entirely ignored or overlooked by the writers of history. Southern people after the great war were too busy building up the waste places and repairing broken fortunes to think of writing history. Southern people, as a rule, are too modest and too reticent to boast of their great and noble deeds. Doctors, more perhaps than any other class, have neglected to do their duty along this line.

It is not my intention to go into details nor to refer at any great length to historical matters but the object of this paper is to call attention of the profession to this subject with the hope that we may all take more interest in such matters in the future. Prof. Agassiz once said he had not time to make money. This is nearer the truth with reference to us than to any other class of people. We have not time —the active physicians—to make money. Too many of us think we have not time to take an interest in the history of our profession. But we owe it to the South, in the rising generation, to duty and to ourselves to take some interest in this matter in order that those who come after us may have an opportunity of knowing the truth. This mater is regarded by some as idle sentiment. It may be sentiment; but, if so, it is a God given principle, and I would that we all possessed more of it than we do. The further we get from sentiment the further we get from God.

After eight years lobbying and knocking at the doors of Congress W. G. Morton succeeded in getting that body to recognize him as the discoverer of surgical anesthesia. But the facts show that Crawford W. Long, of Georgia, used surgical anesthesia two and a half years before Morton or any one else claimed to have used it. In the year 1877 Dr. J. Marion Sims circulated a pamphlet in which he brought such an array of facts to support the claims of Crawford W. Long that no one was able to deny or disprove the statement that Long first used surgical anesthesia. The matter was brought before the Mississippi Medical Assocation in 1899 and by a unanimous, standing vote that body said Dr. Long deserved the honor. Other State assocations adopted like resolutions. No one at that time attempted to deny what Dr. Sims had stated in his pamphlet. But since that time many seem to have forgotten the matter; and now e see it stated frequently in Northen papers that Morton deserves the honor. A few months ago Dr. Long's native State reared a monument to his memory, with this statement as part of the inscription:

"In memory of Dr. Crawford W. Long the first discoverer of Anesthesia, the great benefactor of his race. Born Danielsville, Madison County, Ga., November 1, 1815. Died, Athens, Ga., June 16, 1878."

On another side of the monument is the following inscription:

"Sulphuric Ether Anesthesia was discovered by Dr. Crawford W. Long on March 30, 1842, at Jefferson, Ga., administered to James W. Venable for the removal of a tumor."

This was tardy justice at last, but such is life.

"Alas, too late oft comes the laurel wreath,
A Tasso's brow was pale and cold in death,
Before the long grudged bays trembled above,
The lips that sang of glory and of love."

Only a few months ago a medical journal with a very large circulation advocated the claims of Dr. Morton, and intimated that the argument in favor of others was closed. So far as I know I was the

only man who replied. The proof that Long discovered or first used surgical anesthesia is as plain as that which proves that Washington was once President of the United States. Yet Northern writers and speakers persistently ignore the facts. The old quotation. "Let justice be done though the heavens fall," should be remembered and followed by all. But we add, let just justice be done, although a Southern man be honored thereby. We want the young men in our profession to take an interest in such matters of history, and be ready at all times to reply to those who would ignore or misstate the facts. So long as I may live and remain able to write, it is my purpose to speak out in favor of the truth whenever occasion demands it.

Inasmuch as nearly all the book makers living in the Northern States seem to think "no good thing can come out of Nazareth" (the Southern States), it has been to me a mystery always that some movement has not been made to deprive Dr. Ephrim McDowel of the honor of being the first to perform ovariotomy. There is only one reason in my opinion that such effort has not been made, and that is,

"They can't do it, you know." Dr.J. Marion Sims, another Southern doctor, bent a large spoon handle and introduced it in to the vagina of a negro woman and saw what never a man had seen before. In this way the Sims vaginal speculum was discovered, and operations performed successfully which had never been dreamed of before. The discoveries of Dr. Sims have been the cause of making comfortable and happy many thousands of helpless women whose lives were about worn out with suffering. It is a greater honor to have discovered or invented the Sims speculum than to be a conqueror of mighty armies.

The grand, noble men who served as surgeons in the armies of the Confederacy during the Civil War are to my mind the greatest, the most deserving of honor, who have ever in any age of the world practiced the medical profession. The young men in our profession should see to it that those noble men occupy the placein history they so well and nobly won. When we remember how they were hampered in their noble work for want of almost everything now regarded as absolutely necessary in such cases; when we remember how well they succeeded, we cannot but believe the Great Physician stood by them and held up their hands, their energy and their lives while in discharge of their great and most responsible duties.

When speaking of the heroes of those dark and gloomy days we should not forget to mention the name of the late Dr. Warren Stone, of New Orleans. When he was ordered against his will to consult with the physcians of the United States Army, when the soldiers were suffering with a disease not understood by them, he said: "It is mange, a disease of dogs." A prison cell yawned for him, but he braved all and told the truth. This is but one incident in the life of that great man during those stirring times which proved him a hero.

In Chicago when Southern prisoners were confined and dying from the effects of cold, Dr. Brunson reported as the cause of death "Frozen to Death." He was threatened by prison authorities with serious punishment if he did not change his diagnosis. But, true to himself, true to honesty, to truth and his noble profession, he refused to change the diagnosis, and then challenged them to call in any Chicago physician or surgeon to make a post mortem examination to see whether he was right or not. They did not dare to accept the challenge. He was not only a physician in every sense of the term, but he was a man; and he felt like the Roman actor who, standing in the arena, said: "I am a man and whatsoever concerns man concerns me," (and was applauded by that vast audience rising as one person).

It is impossible to name all the great men in our profession from the Southern States who have done enough to deserve honor and praise of, not only this, but of future generations. At the risk of being tedious I will refer to one man whose name is almost forgotten, Dr. Samuel A. Mudd, of Port Tobacco, Maryland, dressed the broken leg of John Wilkes Booth, and, because he did not become a swift informer, because he was true to his professional honor, because he did not betray the secret of his patient, he was sentenced to life imprisonment, and for years suffered all the horrors of prison life that hellish ingenuity could devise. He was true to his professional honor, true to his patient regardless of consequences. Suppose Booth had killed President Davis instead of President Lincoln, suppose some Northern physician had dressed the broken leg and refused to betray his patient and had gone to the penitentiary rather than betray him. Do you not know that the name of such physician would be heraled in song and story as a hero among the greatest. But Dr. Mudd, the only man whom courts have punished

for keeping the secret of his patients, is almost forgotten. But I hope some day the medical profession will erect a monument to his memory, and inscribe on it these words: **"He loved his professional honor better than gold, better than life."**

But this is not all. When yellow fever visited Dry Tortugas, where he and his fellow prisoners were confined, the prison physician was one of the first to die. Then Dr. Mudd took charge of the sick and treated successfully, not only his comrades in distress, but also the soldiers who were guarding them and heaping all manner of indignities upon them. His fellow prisoners begged him to let their enemies die. They said, **"Yellow fever s a foe which has no respect for prisoners nor guards, it treats all alike, we are all on an equality here, it does not even have respect for race, color or previous condition."**

But Dr. Mudd was a man, and whatever concerned man concerned him. After he and his fellow prisoners were pardoned (there being no evidence in any instance of guilt), some one introduced a bill in Congress to pay Dr. Mudd for his professional services to the United States soldiers. But he never received a cent. We can at least do honor to a member of our profession who has suffered many times the agonies of death because he refused to betray the secret of his patient. Let us teach the young men in our profession to honor the memory, and if occasion demands, imitate the example of this noble man. The names of many other great men in our profession should be mentioned, but no one can do this in a short paper of this character. If the physicians of the South will stand up boldly for the truths of history, so far as related to our profession, truth and justice being on our side, we cannot fail of success. But if we are careless and unconcerned failure will be our portion.

"Let any man show the world that he feels,
Afraid of its bark, and 'twill fly at his heels;
Let him fearlessly face it, 'twill leave him alone,
But will fawn at his feet if he fling it a bone."

THE DIFFERENTIAL DIAGNOSIS AND TREATMENT OF THE LEUKEMIAS.*

By Chilton Thorington, M. D., Montgomery, Ala

Mr. President and Gentlemen:

The terms leukemia and leucocythemia were proposed by rival claimants for priority of discovery. Virchow proposed the term Leukemia, while Hughes-Bennett used the term leucocythemia. From an etymological and histological standpoint, leucocythemia is more expressive of the blood, while leukemia simply means white blood.

Von Leube designates leukemia as a disease characterized by an increase in the number of white cells in the blood, as the result of morbid activity of the blood forming organs, and in which the blood alteration forms the essential feature of the progressive and pernicious course of the disease.

Two types of leukemia are described, the myeloid, and the lymphatic. Either type may become chronic or acute, and by some investigators it is claimed that each type has a separate etiology, however, this seems improbable, inasmuch as a chronic leukemia, may have an acute onset as well as an acute termination.

Although leukemia is more common in middle life, and in males, cases occur in quite young infants, and in the aged.

The disease usually runs its course in two or three years, however, it may prove fatal within a few weeks, or its pernicious course may continue for a number of years.

It is said of leukemia that it is the only disease affecting alike man and the lower animals, such as the sheep, ox, hog, dog, cat, and chicken.

The early symptoms of myeloid leukemia are those of other anemias, viz.: indigestion ,anorexia, headache, weakness, shortness of breath—amounting to dyspnea on exertion—palpitation, faintness, and as is claimed by some, priapism. These symptoms are insidious in onset, and are followed by emaciation, pallor, fever, and splenic enlargement. The lymph glands may become enlarged, however, Cabot states that he has never detected enlargement of the lymph glands in the myeloid type of leukemia. Hemorrhages are the most unfailing symptom, and may be the first cause of real alarm, or the impelling influence which causes the patient to seek medical advice. They may take place from any of the mucous

*Read before the Medical Association State of Alabama, April, 1917.

membranes, especially the stomach, or into the skin forming large pupuric spots. When occurring into the brain hemiplegia may result, or indeed, sudden death. Dropsical swellings appear as a late symptom. The urine contains albumin and casts; also an excess of uric acid.

The blood picture of myeloid leukemia is characteristic; distinguishing it from all other diseases. In recent cases the blood's gross appearance may not differ from the normal, but in extensive cases it may be pink, and more opaque, while in some cases the blood may appear quite dark, or even chocolate color. Coagulation is slow, or may be absent altogether.

The red cells are diminished in number. Osler's average count being 2,800,000, however it may be as low as 500,000. Poikilocytes, macrocytes and microcytes are rare, but normoblasts are found in rather large numbers, and according to Emerson, are best studied here. Hemoglobin is reduced causing the color index to fall below unity, usually in the neighborhood of .5.

Hyperleucocytosis of 500,000, or more, is not an unusual finding in leukemia, however, in a few cases, and just before death, there may be a leucopenia. Neutrophilic myelocytes predominate, and may constitute 30 to 50 per cent of the white cells, while basophilic myelocytes are next n importance, in diagnostic significance, being 5 to 10 per cent. of the leucocytes. Eosinophilic myelocytes are also found, but never as many as the above. Lymphocytes, both large and small, are found. Indeed it is the polymorphorous state of the blood that impresses us.

Acute lympatic leukemia, as described by Ebstein and Frankel, is characterized by suddenness of onset, by its febrile course, and its resemblance to that of a severe, acute, infectious disease. Splenic and glandular enlargement is not an early symptom—at least not noticeably so—but the most prominent clinical feature is a hemorrhagic tendency of the disease; it has the appearance of hemorrhagic purpura, and may be confounded with this, especially as the hemorrhages may occur before the characteristic blood picture is formed. Stomatitis and tonsillitis should have been mentioned as early symptoms.

Patient. Negro, male; age 19.

History. Negative, except typhoid fever two years previous. He denies ever having syphilis, and remembers no attacks of malaria.

Symptoms. Onset sudden, first noticed by headache, indigestion, weakness, fever and prostration. It was not until the advent of hemorrhages from nose and stmach that he sought medical advice.

Phyiscal Examination. The tonsils were somewhat swollen and inflamed. Temperature ranged from 100 to 103. No splenic or glandular enlargement. To obtain sufficient blood for a smear and Widal, some six or seven stabs had to be made into the finger tips, and even then only a few drops could be obtained. The smear showed an enormous number of small lymphocytes, and some few large lymphocytes. Only one or two normoblasts were noted. A positive Widal was obtained, but may have resulted from his antecedent attack of typhoid fever, or as we sometimes find, from other processes not understood.

Chronic lymphatic leukemia is characterized by its protracted course, by painless enlargement of the lymph glands, and probably some enlargement of the spleen. Pallor and emaciation are manifest. Continued hemorrhages provoke anemia which in turn causes viceral changes, especially in that of the heart, giving rise to myocardial insufficiency.

The blood shows a hyperlymphocytosis, especially the small lymphocytes, which may represent 90 per cent. of all the white cells. Limbeck considers that the blood picture in this form of leukemia is not sufficient for a diagnosis, since in some cases of lymphosarcoma the blood findings may be similar. In a few case of lymphosarcoma in which I examined the blood the lymphocytes were increased, but not to the extent found in leukemia. A case recently referred to me for blood examination, showed nothing unusual whatever, however, he had just returned from Johns Hopkins where radium treatment had been instituted.

In making a differential diagnosis of leukemia from other diseases we must depend largely upon the blood findings, as in no other diseases do we find a similar blood formation.

The anemias are to be differentiated by process of exclusion and inclusion. The pernicious type, which at first sight might be considered leukemia, will fail to show splenic and glandular enlargement, and the blood picture is quite different. The most striking thing about the blood of pernicious anemia is the great reduction in the number of red cells with a relative increase of the hemoglobin. The color index is always above unity ,and quite frequently as high as 1.8. Poikilocytes and megalocytes are numerous. The megalocytes are but normal red cells greatly enlarged because of

the additional hemoglobin crowded into them, and it would seem that the poikilocytes, are but ruptured megalocytes. Polychromatophilic degeneration is extensive in pernicious anemia. The megaloblasts should exceed in number the normoblasts, otherwise a diagnosis of pernicious anemia is not justifiable. The leucocytes are not increased in number, and the lymphocytes may equal the neutrophiles.

Splenic anemia, from a clinical standpoint, may have many symptoms in common with leukemia, especially myeloid leukemia. The patient shows unusual pallor, or may be lemon color. He presents symptoms usually found in the anemias, with the additional symptoms of hemorrhages, and an enlarged spleen. The splenic enlargement may be very great, extending to the median line, and occupying most of the left side of the abdominal cavity—displacing part of the vicera. Its upward enlargement may displace the heart until the apex may be located in the fourth intercostal space. A blood smear made from patient with splenic anemia looks nothing like that of leukemic blood. The leucocytes are diminished in number, and a differential count shows nothing unusual.

Hogkin's Disease, or pseudo-leukemia, may resemble the leukemic state because of lymph gland enlargement, and the anemic course of the disease, but here again will a blood examination assist us in differentiating the two diseases. Beyond a moderate anemia there is nothing extraordinary regarding the blood of Hogkin's Disease. A microscopical examination of one of the excised glands should settle all doubt.

Tubercular glands are more irregular in shape and distribution than those of lymphatic leukemia. The blood findings are negative, therefore the disease must be differentiated by exclusion, or else a diagnosis of tubercular glands is to be made either by microscopical examination of one of the glands, or by tuberculin injections.

Syphilitic glandular enlargement may have to be excluded before considering a patient leukemic. A negative blood picture, but a positive Wassermann, should reveal the nature of the diseases. In absence of a blood examination, one of the glands should be punctured with a hyperdermic needle and some of the substance examined under a darkfield condenser for treponema pallida.

Simple leucocytosis is to be differentiated from leukemia by the transiency of the former, and a preponderence of the neutrophiles.

Casual treatment in leukemia is impossible, as the etiology of the disease is yet to be found. Arsenic for many years was the drug most used. It was given in the form of Fowler's solution, but more recently in its newer combinations such as atoxyl, soamin, and sodium cacodylate.

Treating leukemia on the hypothesis that it is due to a spirochete, Louis Mix claims encouraging results from the intravenous injections of neosalvarsan.

Glandular and splenic enlargement are reduced by X-ray treatment, however, the course of the disease appears to be otherwise uninfluenced.

According to letters received from Hot Springs, Ark., the radio baths are not beneficial. Dr. Martin states that his X-ray man claims all the credit for any improvement that might be noticed in these cases. He states that under the X-ray treatment the glands and spleen seem to fade away.

Benzol has received critical study by many prominent internists. Its action would seem to be selective, inhibiting cell proliferation in leukopioetic tissue and stimulating cell proliferation in hemopoietic tissue. It is claimed that benzol is more potent in chronic leukemia, and less potent, or actually dangerous, in the acute form. The dose of benzol recommended in these cases is from one to two drachms daily. It is best administered with equal parts of olive oil in capsules.

Should white cell proliferation be due to over-activity of some ductless gland located within the brain, which presides over the lymphatic glandular system, then it would not be unreasonable to hope for a cure of leukemia by the use of suitable endrocrins. It is possible that in this line o ftreatment only have we hopes of ever curing the disease.

No matter what plan of treatment is adopted in the leukemias, many organic proprietary preparations are exploited for the anemia; but after all too much reliance cannot be placed in these highly organized products, inasmuch as these beautiful—though frail—structures may become reduced to their original elements by the iconoclastic action of the gastric juices.

TREATMENT OF BREAST TUMORS.*

By J. L. Campbell, M. D., F. A. C. S., Professor Surgical Anatomy (Atlanta Medical College, Medical Department Emory University), Visiting Surgeon Wesley Memorial Hospital Atlanta, Ga.

The lives of patients consulting us depend on our ability to make a correct diagnosis. This is certainly true when consulted by women with tumors of the breast, for a large per centage of all breast tumors are malignant from the beginning, and not less than 90 per cent. become malignant if allowed to remain; therefore, if we expect to be of the greatest service to our cancer patients, we must see that they receive the proper treatment during the early, or if possible, the precancerous stage.

There is no definite means even with the best history and physical examination, by which we can make a definite precancerous diagnosis with certainty. It is little short of criminal for us to soothe the fears of the patient and let a disease with 100 per cent. mortality, progress beyond the curative stage.

Our duty in breast tumors is clear. We must, while endeavoring to be conservative, have the statistics relating to simple and malignant tumors of the breast at our command, and present the case so clearly that patients will consent to have the proper treatment.

I felt that it is the duty of the medical profession to take some steps to educate the public with reference to cancer, especially cancer of the breast and uterus. Many lives that might easily be saved are sacrificed annually, not only on account of the effort of the doctor to be conservative, but on account of the ignorance of the public.

I would not have you think that I believe every lump in the breast is malignant, or requires removal, for I have seen a number of young women of 16 to 25 with one or two small lumps in the lower and outer quadrant of the breast, that gave considerable pain during menstruation. In my early experience, I removed some of these and found on examination that they were either detached gland acini, or lymph nodes that at most would have caused only local trouble. Of course, it is best to remove these, especially if they are troublesome, but it is not necessary to remove the whole breast. I have now a number of patients under observation, whom I have been watching for a number of years. They have experienced no more trouble than slight pain in these lumps during menstruation, and the lumps usually almost disappear in the interval.

Sarcoma, whilecomprising only about 10 per cent. of breast tumors, must be borne in mind at this period of life and the patient should be closely watched before giving a definite opinion. We must also remember that the breasts of both sexes are liable to mild inflammatory enlargements about the age of puberty, which requires at most, only careful watching.

During the latter years of functional activity and in the early cancer period, the breasts are especially liable to a condition that is on the border line between a low grade of inflammation and cystic tumors. The tumor is characterized by the grouping of a number of small cysts varying in size. It is not, as a rule, adherent to the skin or deep structures. It is painful during menstruation and occurs in women who have not borne children, or who have not nursed their children, and in women who have suffered with repeated attacks of mastitis. In thin women the growth feels like a bunch of small hard grapes beneath the tips of the fingers.

This tumor has received a multiplicity of names. The etiology and pathology are not definitely settled, but as pointed out by Bloodgood, it is of little consequence so long as a tendency to malignant degeneration is recognized, for at least 50 per cent. become malignant sooner or later. A radical operation is not necessary for its cure, especially if seen early. Simple removal of the breast, pectoral fascia, and chain of lymphatics along the lower border of the pectoralis major muscle and at most, the central group of axilliary lymphatics is sufficient. If there is doubt, a sharp knife should be at hand so that a clean incision can be made through the mass; this will, in my judgment, reveal the character of the tumor as clearly as a frozen section examination.

Time and space will not permit the enumeration of symptoms accompanying the large group of benigned tumors and cysts of the breasts. We must explain to the patient that while benign at first, all but about 10 per cent. will eventually become malignant.

Cancer of the breast is more frequent in white than in colored races. I have seen them in women from 26 to 80. As a rule, the younger the subject, the more malig-

*Read before the Fourth District Medical Association Warm Springs, Ga., August 21, 1917.

nant the growth. This is not, however, always true, for I recall a patient of 70 who died with pulmonary metastasis in a few months after discovery of the tumor.

The majority occur between the ages of 40 and 60, with the average age about 51 years. About one-fourth occur before the menopause.

It is estimated that 80 to 90 per cent occur in women who have borne children and 90 per cent. in women who have nursed their children, and a large percentage of cases have nursed several children.

Heredity plays an important role. About 20 per cent. of the cases give a family history of cancer. Trauma is a little less frequently a causative factor. Mastitis is said to occur in about 6 per cent. of all women, and while we find the history of this condition in a great many cancer cases, it is by no means a definite cause.

Malignant degeneration occurs in a majority of benign tumors at varying periods of their existence and without previous warning. Malignant tumors are rarely painful until they have involved the deeper structures and begin to pull upon the sensitive nerves. Pain will usually be referred to the region of the clavicle and shoulder. Benign tumors, and especially those of cystic character, are painful during menstruation, because at that time the breasts are always congested and a slight secretion from the epithelium lining the acini occurs.

As already pointed out, an early diagnosis can not be made with certainty. If we wait for definite signs, such as retraction of the nipple, reddening of the skin, adhesions, pain and glandular involvement, we have delayed too long.

If removal is thoroughly effected before the tumor is visible on inspection, 30 to 40 per cent. of cases can be cured. If after it is plainly visible, 17 per cent.; but if we delay until there are adhesions and glandular involvement, we cannot hope for more than 5 to 10 per cent. of complete recoveries.

If left to medical treatment and cancer quacks, we have 100 per cent. mortality, with an average life after discovery of the tumor of from 20 to 28 months, while cases operated on even after moderate involvement, live on an average of 30 to 38 months. It will be seen that the operation adds at least 10 months to the life of our patient. The operative mortality in careful hands, is not above 1 to 2 per cent.

Statistics of ultimate cure vary greatly, according to the involvement, running from 45 to 55 per cent. when the operation is made early and complete, to as low as 6 to 19 per cent. for late and incomplete operations.

Recurrence near the site of the tumor is quite frequent and may occur as early as a few days, or as late as 30 years after operation. Fifty per cent. of local recurrences will be found within three months, while 40 to 60 per cent. occur within the first six months, and about 2 per cent. after three years. General metastasis occurs in about 17 per cent. of cases.

There is but one treatment for a tumor of the breast. That is removal. As I have already said, every tumor does not need a complete operation in the sense of removing the muscles and glands; but with rare exceptions, the whole breast should be removed, including the nipple and areola, with the chain of glands along the lower border of the pectoralis major and central axilliary group.

For the cure of cancer of the breasts, we are as much indebted to Halsted, as we are to Bassini for the cure of inguinal hernia. Every complete operation for cancer of the breasts, of which there are many varieties, is based on Halsted's original plan. Personally, I am partial to the incision described by Jabez Jackson and have used it almost exclusively of late.

In this paper, I have used in the main, statistics arranged by J. M. T. Finney, my own experiences closely tallying with them; I have come to the conclusion:

First—That we should advise the removal of every tumor of the breast, for if not already malignant, it has at least 90 per cent. of chances of becoming malignant in the future.

Second—That it is our duty to educate the public so that women suffering with tumors of the breast, may know to consult a physician as soon as the lump is discovered.

Third—We must lay the above facts forcibly before these patients, and urge them to submit to an early operation. If they decline, we have done the best we could under the circumstances.

Fourth—Frozen section diagnosis, while I would not like to discard it, is not as reliable as I once thought it was, and some of the best pathologists do not advocate it.

Fifth—It is perhaps not wise to remove a piece of the tumor and wait for the hardened section, for you have lowered the resistance of the surrounding tissues and invited metastasis.

Sixth—If there is still doubt about the

diagnosis, remove the whole breast. Then with a long sharp knife, make a section through the tumor mass. With a little experience, we can be as sure of the diagnosis, as with frozen section examination. If any indication of malignancy exists, the axilliary space should be thoroughly cleaned out and the glands along the lower border of the latissimus dorci muscle removed.

ORGANIC DISEASE AS A CAUSE OF NERVOUS DISORDERS.

By F. C. McDowell, M. D., Zebulon, N. C.

When we reflect upon the rapid increase of nervous and mental disorders, it give sus food for thought. We naturally ask ourselves: What are the essential factors in the production of these nervous disturbances?

These questions are more easily asked than answered, however, there are, at the present day, many conditions that play a most important part in the weakening and undermining of our nerve forces. It is the purpose of this paper, in the limited time allotted me, to touch upon some of the most important of these factors.

There are a number of nervous conditions that are associated with physical disturbances and inasmuch as we cannot even attempt to discuss all of them, we have chosen the one we most often meet in general practice—**Neurasthenia.**

Every practitioner, whether general or specialist, is constantly dealing with certain manifestation of neurasthenia, as they appear upon the physical side.

Let us grasp this fact, at the very outset, that neurasthenia is not a disease entity in the sense that typhoid fever is, but is a functional disorder of the nervous system; a reaction, as it were, of all or parts of the nervous system to certain **stimuli**, which are known as contributory and exciting causes.

The symptoms are extremely varied. They may be general or local, according to whether all or part of the nervous system is involved. Neurasthenia may be defined as a condition of exhaustion in the general nervous system. If we but bear in mind this essential fact that every act of mind or body is attended by certain chemical and physical changes in the cells of that part of the nervous system controlling the act, we can more readily understand that if those cells are overtaxed, that is, if they are made to work beyond their physiological limits, there must inevitably result a state of exhaustion of those nerve cells. This is then what we mean by neurasthenia, an exhaustion of the cells in the general nervous system.

Heredity plays an important part and, according to some authors, the most important of all the factors in the production of neurasthenia in transmitting to the individual an imperfect development and inherent weakness of his nervous system. Such individuals start life handicapped with a neuropathic predisposition and later furnish a large prooprtion of our neurasthenic patients. Such individuals become unable to bear the strain that follows in the effort attendant upon gaining a livelihood and, from worry and anxiety, become nervous breakdowns, for their nervous systems are incapable of the highest development and, therefore, are incapable of standing exhausting strains.

The exciting causes are numerous. Neurasthenia is very apt to develop in those who lead a life of too continued effort without sufficient rest and food, harassed by business or professional cares. Great excess in work, accompanied by worry, is a very common cause. We see many such cases among business men, college students and professional men of all kinds, in fact, there is no vocation that does not have its full quota.

It is more common among men than women, however, there are many cases of neurasthenia in women that are wrongly called hysteria, for the erroneous impression still exists, that only women have hysteria and men neurasthenia. It is high time that we know better and that we learn to distinguish between the two conditions.

Neurasthenia is a disease of civilization and is more common among the better classes, and among the highly educated, and is more common in towns and cities than in the country. This can be explained upon the ground that these classes, living under greater strain to gratify tehir ambitions, give little time to those natural diversions so necessary to relieve their nervous tension, which is keyed up to the highest point. Many such nervous breakdowns could be avoided, if the individual only relaxed sufficiently each day before the breaking point was reached. The strenuous life, then, is an extremely important factor in causing neurasthenia.

The symptoms may be classed into mental, cerebral, spinal, sexual, vasomotor and sympathetis. The mental and cerebral symptoms are the most common. We find the neurasthenic unable to fix

*Read before the Sixth District Medical Society, Raleigh, N. C.

his attention on what he is reading. His memory is poor; he is unable to reason consecutively and logically as before; he cannot come to any definite conclusion, but rather is in a state of indecision. He isperplexed what course to pursue and worries because he does not accomplish anything. He becomes irritable because of his inability to produce results. He becomes moody, introspective and suffers from depression of spirits and nothing gives rise to a sense of pleasure and all mental processes become painful and distressing at times. His depression differs from that of melancholia as the neurasthenic seldom blames himself for his imaginary troubles or ill doing, while the true melancholic usually censures himself and takes the blame for his misery. The neurasthenic attributes his distress to every possible cause rather than to anything he has done or failed to do to cause his distress.

We find many morbid fears—phobias—in neurasthenia. This may take the form of either an indefinite sense of apprehension or it may be an actual fear of something, either disease or some calamity of some kind. Physicians when neurasthenic are very apt to fear some disease like locomotor ataxia or paresis. The neurasthenic who is addicted to the use of alcohol is especially prone to these morbid fears.

The emotional control is defective in neurasthenia, but not to the extent it is in hysteria. We sometimes see patients, especially women, who are suffering from both neurasthenia and hysteria, but it is imperative that we distinguish between these two disorders and not call everything of a nervous nature hysteria or neurasthenia and feel we have made a complete diagnosis.

Both conditions are functional disorders and are often associated with some physical disturbance. Most neurasthenics suffer more or less from insomnia, which at times is a very distressing symptom. They also have headache which varies in intensity during the day, being increased by mental exertion and relieved by food. The headache may either be in the nature of pulsations or pressure on the top or back of the head, especially at the occiput. Vertigo is often complained of, either an actual dizziness or a sense of movement of the body when at rest or unsteadiness when walking, causing a feeling of discomfort. Of course, the dizziness of neurasthenia must not be mistaken for that of cardiac origin, though the two may be associated.

As we have noted, the neurasthenic possesses at times very marked irritabiility of temper, an out-of-sorts feeling with everything and everybody. He has been called the "grouch' by the laity who come in contact with him.

The spinal symptoms manifest themselves in pain in the back, tender spots along the spine, muscular weakness, especially in the extremities with marked prostration after moderate exercise. There are often various subjective symptoms—numbness, tingling, and various neuralgic pains throughout the body of an indefinite character for the most part, though at times they may simulate very closely those of tabes.

Palpitation, tachycardia, cold extremities and various flushes throughout the body are the main vaso-motor symptoms. Some acquired disease, especially syphilis; some infectious disease, grippe or typhodi; some long continued disease like tuberculosis, or carcinoma; some gastric or intestinal disorder; some condition of the gall bladder with obstruction to the flow of bile through the gall-ducts with subsequent absorption of the bile into the general circulation—all these are often attended by marked nervous disturbances which, for the most part, belong to those of a neurasthenic type and in many instances the nervous picture presents itself so prominently to the attending physician that for a time at least the physical disturbance may be overlooked until the physical signs become so pronounced that no longer is the true chaarcter of the disturbance in doubt.

I want to lay emphasis on this fact, that many physical disorders are overlookedfi if we are not on our guard, by the nervous symptoms obscuring the true nature of the trouble. How often have not cardiac conditions in their early stages, before there is loss of compensation, been unsuspected till loss of compensation revealed the true status of affairs?

We often find neurasthenia as a concomitant of Bright's disease, both in the parenchymatous and in the interstitial forms. The retention of effete matter that should be excreted by the kidneys leads to an auto-intoxication, which in turn causes a train of nervous symptoms which may be a mild or severe type—insomnia, mental irritability or depression. This is especially true of the interstitial form of Bright's, which is often slow and insidious in development. Thus long before the nature o fthe malady is suspected, either by the patient or the physician, the patient has suffered from a marked neurasthenia and perhaps Bright's dis-

ease was only discovered when some manifestation of uremia either severe and uncontrollable vomiting or severe diarrhea brought the matter to the mind of the unsuspecting physician. Some ascribe chemical poisons developed in the body by imperfect metabolism as causes of neurasthenia.

We know that the uric acid diathesis is undoubtedly a factor in many cases, for gout and rheumatism are very often associated in many cases with neurasthenia. It is a question whether chronic auto-intoxication by defective digestion is a cause or result of neurasthenia. At any rate, they are frequently assoicated and combined.

We often see atonic conditions of the stomach with enteroptosis, chronic colitis with distention of the intestines, recta ldiseases—piles and fissures give rise to neurasthenia. Excesive use of tobacco, alcohol, coffee, tea may lead to neurasthenia; at least, they are often associated.

Likewise there are many pelvic conditions that are associated with marked nervous states. Menstrual disorders, amenorrhea and dysmenorrhea, uterine and ovarian diseases of different kinds are very likely to cause continued irritation and finally exhaustion of the nervous system. Many cases of lacerated perineum, with secondary displacements of the uterus, ovaries and bladder, become a source of constant sensory irritation and discomfort which so wears upon the nervous system as to cause neurasthenia of a very pronounced type. Only when the perineum is repaired and the parts restored to their normal positions can we hope for restoration of nervous equilibrium. Many of these pelvic conditions, I fear, have sometimes been called hysteria because of the prominence of the nervous element without making a thorough physical examination.

The prolapsed viscera of the abdomen gastroptosis, nephroptosis and enteroptosis are accompanied by well known nervous symptoms. The gastric and enteric disturbances are likewise very marked and indicative of a very pronounced neurasthenia and until the parts are restored the nervous phenomena persist. All of us are doubtless familiar with the neurasthenia so common in certain gastric conditions, especially in the form called Neurasthenica gastrica, better known as nervous dyspepsia. In many of these gastric disturbances we may have a vicious circle formed, that is the nervous disturbances aggravate the physical disorders and conversely the physical make the nervous much worse.

We all know of the neurasthenia that often accompanies pellagra, movable kidney, diabetes and many other like diseases, also of the reflex conditions that so constantly wear upon the nervous system as to cause nervous exhaustion. Eyestrain is a good example of these reflex disorders causing neurasthenia; nasal, throat and ear conditions are to be mentioned as contributing their share of these troubles. Only when these conditions are recognized and properly treated do we find the nervous disturbances removed.

We come now to speak of the glands of internal secretions, the so-caled ductless glands, especially the thyroid as having an important bearing in the production of neurasthenia. We now recognize the disease exophthalmic goitre as being due to excesive secretion of the thyroid and myxoedema as due to absent or diminished secretion of this gland. We further know that both of these diseases are accompanied by most marked nervous symptoms which are for the most part neurasthenic. The point I wish to make, however, is that there are mild cases in which the increased secretion is not sufficient to cause a tachycardia, exophthalmos and swelling of the neck which three symptoms always go with a true case of Graves' diseases, yet such cases often present all the symptoms of a neuprasthenia that are found in exophthalmic goitre. Thus the underlying cause, the hypersecretion of the thyroid, escapes the notice of the physician and because such cases only have the nervous phenomena without the physical manifestations they are wrongly diagnosed hysteria when they are really only a neurasthenia. The symptoms are wakefulness that is very persistent, mental irritability, restlessness and excitability. The excitability at times is so severe as to arouse the suspicion that the patient is mentally unbalanced.

We also find a pronounced type of neurasthenia associated with diminished secretion of the thyroid which does not go into myxoedema, yet present symptoms of a nervous character very similar to those found in myxoedema. The symptoms in this condition are chiefly lassitude, sluggish-mentality, unwillingness to attempt any physical or mental work, and dullness incompatible with the patient's former habits. They suffer from muscular pains especially of the head and neck. The skin is dry, often cracked with occasional spots of pigmentation, the hair is lusterless, dry, falls out readily and lacks in the natural oil of the skin. Sometimes there is a thickening of the skin as in

true myxoedema. The patients suffer greatly from the cold and have nervous chills with no rise of temperature. They are obstinately constipated with intestinal fermentation and often show indican in the urine. Any person suffering from neurasthenia with such a combination of symptoms should at once arouse in us the suspicion that the patient is suffering from an imperfect supply of the secretion of the thyroid. The administration of the thyroid extract will generally relieve this form of neurasthenia.

The neurasthenia associated with the menopause is often of a very marked form. The ovary and thyroid gland are related closely in their physiological actions. This cessation of the internal secretion of the ovary is probably followed by an increased activity of the thyroid at the menopause. Thus the neurasthenia at the change of life is probably due to the lack in the blood of the internal secretion of the ovary, permitting the increased activity of the thyroid, in other words, the balanced relation between these organs is disturbed and the check, so to speak, being removed by the ovary ceasing to functionate the thyroid secretion is unimpeded.

Sexual Neurasthenia occurs mostly in boys and young men. Girls sometimes are affected as well. It develops in those who have indulged in sexual excesses or self-abuse. There results a state of unnatural activity in the spinal centers because the mind has been fixed too long upon sexual matters. Upon slight suggestion erections occur frequent and emissions so weaken the patient physically that the mind is depressed and a state of introspection and mental distress follows. The patient manifests his shame inthe face and the symptoms of a neurasthenia develop. Freud disregards sexual trauma as the basis of hysteria and he also regards neurasthenia as largely a product of disturbance in the sexual sphere. According to Freud, the most fundamental of all complexes is the sexual complex, which he believes originates very early in infancy and maintains its dominating influence throughout life. According to him then the sexual impulses furnish the basis of the psycho-neuroses. These impulses have to be repressed. The constant effort to ignore or repress these disagreable and shameful experiences connected with the sexual complex, has caused a morbid stress of mind. He believes sexual abuse or sexual trauma exists in every one at some early age. If these experiences are successfully repressed the complex after a time no longer consciously influences the course of thought. It is not obliterated from the mind, but remains in the region of the sub-conscious or unconscious. From the sub-conscious Freud holds that there is a constant tendency for the complex to emerge and though repression has to be kept up all the time by an act of mind which he calls **censure.** Such an act is attended by more or less emotion and hence the individual may be more or less constantly under an emotional strain. This emotion may then be transferred from the unconscious train of thought to some conscious train of thought lending an emotional character to some mental act that otherwise would be without emotion.

If this complex energy with its emotion is diverted into a physical channel, Freud terms the process **conversion,** and believes that it is the basis for many hysterical physical symptoms such as spasms, convulsions, or paralysis. He holds that every case of hysteria is the result of some preceding psychic trauma; that such a trauma may be produced by any experience which produces fear, anxiety or shame. Such experiences, according to him, are **always** in the sexual sphere.

Neurasthenic symptoms are not uncomomn in many organic diseases, especially in multiple sclerosis and in the arterial conditions which precede apoplexy. Headache, vertigo, insomnia, and inability to work continuously, or to remember, are premonitory symptoms of apoplexy. The diagnosis will have to be made by exclusion and from the definite physical signs of these two conditions, in addition to the neurasthenic symptoms.

There are two forms of organic disease of the nervous system with which neurasthenia is most likely to be confounded, tabes and general paresis.

The spinal symptoms of neurasthenia may resemble those of tabes, but with the symptoms and physical signs of tabes the diagnosis is not ordinarily difficult to make.

The symptoms of the cerebral form of neurasthenia may, for a time, closely simulate a beginning paresis and often there is great difficulty in the early stages of paresis in making a diagnosis. Thus, not infrequently it has happened that a case of incipient paresis has been called neurasthenia and conversely neurasthenia has been diagnosed paresis. The mistake either way is bad enough.

Therefore let us thoroughly investigate our cases from all sides with an open mind. If we but remember this impor-

tant fact that the human individual is a biologic unit and that all of his several parts are parts of this unity and that there is an inter-relation existing between the different organs of the body and of the close relationship existing between certain ones, then we will not make hasty and ridiculous diagnoses.

Finally, in conclusion, we must not forget that the conservation of our nerve forces is of as great importance as the conservation of our food, our forests, and other material wealth.

If we become more thoroughly aroused along these lines I believe that many will be saved from more serious nervous and mental troubles who otherwise are doomed (perhaps) to become inmates of our asylums.

We are the first, as a rule, to see these patients in the beginning, therefore, it is imperative that we do not fail in our duty toward them in determining the causes of their troubles and, if possible, in rendering them timely asistance.

"'Tis a consummation devoutly to be desired."

VARIATIONS IN SURGICAL TECHNIQUE IN TONSILECTOMY.*

By M. R. Gibson, M. D., Citizens Bank Bldg., Raleigh, N. C.

Up to within the last eight or ten years the operation universally done on the tonsils, either onaccountof hypertrophy or diseased conditions, consisted in the removal of those portions only that protruded beyond the faucial pillars—the so-called tonsillotomy. With the increase in knowledge ofthe anatomy and the pathology of the organs, this partial operation has to a large extent been superseded, by the radical operation of tonsillectomy, by which is meant the complete removal of the tonsil in capsule. The change is one of the greatest of the advances that have been made in recent years in the surgery of the nose and throat.

Operations on the tonsils, other than those for malignant disease, are done for one of two objects,—either to remove an obstruction or to relieve conditions brought about by the absorption of bacteria or the toxic products from the crypts.

If an incomplete tonsillectomy is done a regeneration of lymphoid tissue often occurs. Anything other than complete removal of tonsil is entirely inadequate in those cases in which the symptoms depend upon absorption from the crypts. The reasons are obvious. Debris and its accompanying bacterial growth are most noticeable at the deep or blind end of the crypts. Chronic abscess formation and tubercular foci of the latent type are most often found near the capsular surface. This region is not affected in the slightest degree either by a tonsillectomy or by the still milder operations of galvanocautery applications to the crypts, or of slitting the crypt.

Sometimes temporary relief follows these measures, due to the removal of the more superficial plugs in the crypts, but it will usually be found that the symptoms recur, and often with increased severity, since the conditions of retention in the deeper parts of the tonsil may be rendered more pronounced by adhesions and cicatricial contractions at the mouths o fthe cypts. The failure of these mild measures is perhaps nowhere more evident than in cases of cervical adenitis. I have repeatedly seen patient s who showed no improvement in the cervical condition following tonsillottomy but in whom the glandular enlargement promptly subsided after enucleation. I am of the opinion that tonsillotomy or an incomplete removal of the tonsils is without a place in surgery and while it might suffice in a very small per cent of cases of the hypertrophied type, it has no advantage over tonsillectomy or the complete removal and should not be chosen as preferable.

Tonsillectomy is advisable under the following conditions:

Simple Hypertrophy, with symptoms of obstruction to breathing, interference with the voice and the flexibility of the palate or when complications due to pressure are present.

Recurring Attacks of Acute Tonsillitis.—In these cases the origin of the infection should be considered. Occasional mild tonsillitis occurring in the course of infection obvoiusly starting in other parts of the upper respiratory tract do not call for removal of the tonsils. Treatment should rather be directed to those parts primarily involved—usually the nose or naso-pharyns. If, however, these secondary inflammations of the tonsils are of great severity, a tonsillectomy is indicated. In this class of cases a complete freedom from attacks of sore throat after the operation may not be predicated with confidence, since the nodules of the posterior pharyngeal wall and lateral folds are usually involved and are likely to be effected with the same frequency as before the operation. This in no way de-

*Read before the Sixth District Medical Society at Raleigh, N. C., June 20, 1917.

tracts from the value of the operation, as the symptoms of lateral and posterior lymphadenitis are less severe than those of tonsillitis, and is but an indication for the subsequent treatment of these nodules. It should be borne in mind, however, in giving a prognosis to the patient, who very likely will be disapointed if encouraged to the belief that he will have no more sore throats after his tonsils have been removed. If the recurring inflammations are primary in the tonsils and are obviously due to infection from the crypts, tonsillectomy is indicated even if the attacks are not severe. Chronic or subacute tonsillitis in which the soreness of the throat is slight but persistent, with frequent mild exacerbations, is a type always due to absorption from the crypts. It is these cases that most frequently symptoms of general malaise due to the absorption of toxins, or definite infections in distant parts, notably the heart and joints, due to the entrance of organisms from the crypts into the blood stream. Here the results of tonsillectomy are very satisfactory. The patient may be promised freedom from the local throat symptoms and great improvement in the joint or heart lesions, and to their complete subsidence may be expected.

Recurring Peritonsillar Abscess.—Peritonsillar abscess is always due to infection from the crypts. Tonsillectomy is indicated, as it not only removes the source of the infection but also abliterates the peritonsillar space so that a subsequent abscess is an anatomical impossibility.

Chronic Retention in the Crypts.—By this is meant the obvious retention of debris in the crypts or the supratonsillar and anterior fossea. Local or constitutional symptoms are present, or there may be no symptoms beyond a foul breath due to the decomposition of the masses in the crypts. A tonsillectomy is indicated; but it must be remembered that in some individuals the secretions of the mouth or naso-pharynx may be distinctly malodorous with no obvious reason.

Cervical Adenitis.—If the evidence points to the tonsil as the infective source, they should be removed. The reduction in the size of the glands following operation is often marked and if no secondary changes have taken place in them, they usually completely subside. Even in tubercular adenitis improvement often fo lows enucleation of the tonsils.

Systemic Infections.—Whenever the evidence points to the tonsils as the tonsils as the source of systemic infection they should be removed. They may be the atrium of infection and yet be small and to all appearances normal. Cases without tonsillar symptoms, either objective or subjective must be decided individually, and as a general rule the enucleation of the tonsils may be done as a purely experimental therapeutic measure when there are no other obvious foci of infection. The percentage of successes will be very materially increased if this latter precaution is always observed. The teeth and gums, the accessory sinuses of the nose, the ears, and the genito-urinary and gastro-intestinal tracts should be ruled out, so far as may be practicable, as sources of the infection. Tonsillectomy having been decided upon, the situation should be explained carefully to the patient, as in man ycases no benefit follows the operation; if the operator has been too sanguine of results, this reflects discredit on an operation which, in well considered cases, is one of the most satisfactory in surgery.

Anaesthsic. — Tonsillectomy may be done under local or general anaesthesia. In adults the choice rests largely with the patient and depends to a less degree on the preference of the operator. Personally I prefer general anaesthesia in all cases; but if the patient for any reason objects to ether and is a person of a fair degree of self-control, local anaesthesia is perfectly satisfactory.

Local Anaesthesia.—Cocaine 1-4 per cent. solution, Novocaine 1 per cent., may be used.

It is necessary to use only a small amount of these solutions, the important point being to inject them around the capsule into the peritonsillar space, and especially at the base of the tonsil, the separation of whichby the snare is very painful unless thorough anaesthesia is secured. A general mild anaesthesia of the fauces and pharynx should first be produced by swabbing with 10 per cent. solution of cocaine and repeating it in two or three minutes. With a hypodermic syringe having a long needle the anaesthetic solution may then be injected without pain or gagging. Three or four injections may be made through the anterior pillar, beginning at the base and passing upward to the superior pole of the tonsil in the soft palate. The region of the posterior pillar is then anaesthetized by three injections the needle passing through the tonsil till the firm resistance of the capsule is felt and the injection made at this point. If cocaine is used, only a very few drops of the solution should be injected at any given point.

Novocaine may be used somewhat more freely. When thorough anaesthesia is present the operation is done as under a general anaesthetic, except that as little manipulation of the parts as possible is desirable, as the success of the operation depends largely on the freedom of the patient from gagging. One should wait five or ten minutes after injection of solution before beginning to operate, so that it may infiltrate well into the tissues.

General Anaesthetic.—Ether is in most cases the ideal anaesthetic. Complete surgical anaesthesia should be the rule for tonsillectomy, as with the reflexes of the pharynx still active dissection is difficult.

The Preparation of the Patient.—The patient should be prepared as for any major surgical operation. The urine should be examined and the condition of the heart and blood vessels ascertained. Hemophilia should be excluded as far as possible by history. A brisk cathartic should be given the eevning before the operation and the lower bowel emptied by enema in the morning. No food should be taken for twelve hours before the operation. Atropia 1-50 gr. and morphine 1-4 gr. should be given adults one-half hour before starting anaesthetic which will reduce the amount of secretion in the throat and for that reason makes the anaesthesia run more smoothly and gives the operator a better view of the tonsils. The operation should always be done in a hospital. Anyone who has had the experience of treating post-operative bleeding with none of the facilities of the hospital operating room will appreciate this precaution.

The Position of the Patient.—There are a variety of positions; some like one better, others another. The Rose position, with the head over the end of the table, the side position with the head over the edge of the table, or the upright position, the patient being held in a chair by assistants, may be used according to the preference of the operator.

The Operations.—Many methods have been devised for the removal of the tonsils in capsule, among others, dissection followed by snare, the right-angle knife dissection, the dissection with the straight scalped, the finger dissection. Dissection and then snaring, and Sluder's operation are best suited for the removal of the tonsil in capsule with the least trauma to the surrounding tissues. Sluder's operation is not adapted to those cases in which the tonsils are bound to the walls of the sinus tonsillaris by adhesions, especially if the patient gives a history of previous peritonsillar abscess. In this class of cases, even if the dull guillotine is used, bleeding will occur more frequently after this operation than after the combined knife and snare dissection. Personally I always dissect tonsils then snare, for the reason that a good technique cannot be maintained if the operation is done only occasionally and a certain number of tonsils must be removed by the dissection method. I prefer, therefore, to do all my tonsil operations in this way, though the operative time is some longer than that of Sluder's method.

The Combined Dissection and Snare Operation.—The chances of hemorrhage or deformity following the operation here described are reduced to a minimum.

The patient is placed in desired position, a good light is necessary, but the kind of light, direct daylight, reflected light or light from small lamp in the mouth is left to the operator's choice. After the mouth gag has been inserted, the tongue depressor is placed by the operator and this may be one held by mouth-gag or by assistant.

The tonsil is then grasped with a two-pronged tonsil forcep, the upper prongs entering the tonsil at the level of the floor of the supratonsillar fossa, and the lower prongs as near the base as possible. They are easily forced deeply into the substance of the tonsil, where they engage the larger fibrous trabeculea without macerating the more superficial friable tissue. Even in the adult tonsil these trabeculea become much attenuated as they approach the surface, and there they offer little resistance to the pull of a tenaculum; deeper down they are much heavier and stronger. It is, therefore, of the greatest importance that the first bite of the forceps should be a deep one, especially in those cases in which previous peritonsillitis has created a network of adhesion between the capsule and the surrounding tissues. Under these circumstances the line of demarcation between the tonsil and the walls of the sinus can at times only be discerned by moving the tonsil in various directions, and it is most embarrassing to find the tenaculum constantly pulling away during this procedure. The forceps inserted, the tonsil is pulled gently forward and inward, so that the anterior-pillar is put upon the stretch and is backed up by the bulk of the tonsil. With a long, sharp-pointed knife an incision is made just outside the inner border of the anterior-pillar from its base upward and backward to the point of juncture with the posterior pil-

lar. As soon as this incision is made with the knife the white glistening capsule can be seen and this surrounds the entire tonsil, except on its faucial surface.

A blunt dissector is now introduced into the incision, and unless adhesions are present this space may be opened up easily and the whole upper and anterior part of the tonsil turned out of its bed in the sinus tonsillaris. Adhesions may be broken by a more vigorous use of the dissector, but if the adhesions are marked it may be better to divide them with the knife or scissors as the too vigorous use of the dissector thoroughly bruises the tissues and a very painful throat results. The posterior pillar is not touched.

The importance of a perfectly sharp knife in making the initial incision cannot be over-estimated; for if the knife edge be dull, all delicacy of touch is lost; the operator cuts too deeply in his efforts to cut at all, goes into tonsillar substance and so gets outside of the peritonsillar space, and a clean dissection of the tonsil becomes difficult if not impossible, as the line of demarcation between the capsule and the walls of the sinus cannot easily be found.

The loop of a snare threaded with a No. 7 wire is now slipped over the handle of the tenaculum and then pulled down to a size that the bulk of the tonsil will just about fill. No danger of catching the uvula is then present. With gentle traction inward and forward, the tonsil is pulled into the loop and the wire slowly tightened until tonsil is removed.

This last step should be very deliberate, as it is at this time that all the larger vessels of the tonsil are divided, and the longer one takes, up to two or three minutes, the nearer the operation will be bloodless.

The bleeding after this operation is almost always slight as the initial incision with the knife touches no vessels of any size, while all of the larger vesses are divided by the wire of the snare. If the excised tonsil shows an intact capsule, then the ablation has been complete; and in the vast majority of cases such an intatc capsule may be demonstrated. Even when the lower part of the tonsil is missed, as it is occasionally by any method, it is easily removed by a second application of the snare.

Concerning the pasterior pillar; I never dissect it because I think the snare does this better than any other instrument can do it. I have never seen the integrity of the posterior pillar in the slightest degree affected by the wire. This is important because it is here that the largest vein of the sinus wall lies, and if it is wounded, as it often is during sharp dissection, it may give rise to a troublesome post-operative hemorrhage.

The Finger Dissection, as advocated by Richards, is a modification of the foregoing method, the dissection of the upper part of the tonsil being accomplished with the finger after the initial incision through the mucosa with a knife, though it is possible to carry out all the steps up to the aplication of the snare with the finger alone. This operation is applicable to children only where there has not been repeated peritonsillar abscesses.

The Sluder Operation.—The technique of Sluder's guillotine operation is a modification of that of the old-fashioned tonsillotomy. In the latter operation only the epithelial face of the tonsil, or the portion that projected beyond the pillars, was cut away, since it was all that could be forced through the fenestra of the guillotine, while with the Sluder instrument a tonsillectomy is done.

The guillotine of Sluder is a modification of the Mackenzie instrument. Greater strength is needed because of the force used in engaging the tonsil in the aperture, and this is gained by doubling the thickness of the shaft. Greater leverage is obtained by lengthening the handle and shortening the shaft. The knife edge is dull so that it may follow the line of cleavage between the tonsil and the capsule rather than cut through the tissues. The chances of hemorrhage are much reduced by this change. The aperture is elliptical with long axis transverse to that of the shaft. This modification is important, as the circular opening does not hug the tonsil closely and allows some of the surrounding tissues to leak through and to be cut away with the closure of the knife. This particularly applies to the anterior pillar.

The Beck instrument is a modification of Sluder's instrument, and there are still further modifications of the Beck instrument, and I shall not go into the technique of the operations given by these men, but mention the fact that a tonsillectomy can be done by the use of either of these instruments without using any other instruments.

Treatment of the Operative Wound.—Whatever method is used in removing the tonsil, so long as it frees the tonsil within its capsule, with the minimum of trauma, and without injuring the pillars, is a good one and the subsequent treatment of the operative wound is the same. A gauze of a size that will fit snugly into the sinus would be inserted on the end of

a lnog sponge holder passing from the opposite corner of the mouth, so that firm pressure may be exerted outward and backward. The fingers placed under the angle of the jaw make ample counter-pressure. The sinus should then be carefully inspected for bleeding points, and if any are found they ma yreceive attention while the patient is yet under the anaesthetic. The sinus should be dry before the patient leaves the operating room. Many of the so-called delayed hemorrhages are in reality primary in character, and may be found at the time of operation if the foregoing precautions are used. tI is much easier and certainly more comfortable to the surgeon to treat them then and there than to be obliged to have the patient re-etherized later and after the loss of a considerable quantity of blood. The naso-pharynx should always be examined after a tonsillectomy, and if any adenoid growth is present it should be removed. This should not be done, however, until the operator has satisfied himself that there is no bleeding from the sinus tonsillaris, as it is not easy to determine this if there is free bleeding from the naso-pharynx.

Post Operative Treatment.—The patient should be kept in the hospital and in bed for at least twenty-four hours after the operation.

During the first day nothing but cold liquid food should be taken. After that the amount and character of the food depends largely on the amount of discomfort that the patient has on slallowing, though coarse irritating articles should be avoided until the throat has practically healed. The mouth should be kept thoroughly clean with an alkaline wash. The soreness of the throat after tonsillectomy varies tremendously with the individual. Some patients experience only mild discomfort which passes away after three or four days, to such an extent that they no longer mind it. With others the soreness lasts for a week or ten days and is very distressing. This difference cannot usually be ascribed to the different types of operation, but rather to individual idiosyncracy; though in general I think that it is true that the less the throat is bruised by the pressure of instrumentation, the less will be the subsequent pain.

Direct Transfusion of Blood, with a Description of a Simple Method.—Fullerton and Dreyfer, in The London Lancet, say that treatment by direct transfusion of blood has attracted much attention of late during the course of the war, since benefit has been derived from it in many cases of hemorrhage and in certain cases of anemia secondary to sepsis. Lives have been saved when all other methods of resuscitation have failed. In many cases the eect has been immediate and dramatic. They have seen patients who were blanched and shocked and with pulse hardly perceptible brought back to life in a most astonishing way. At the same time they do not recommend its indiscriminate use, and they have only resorted to it in cases which they considered desperate. Transfusion is eected from a small artery to a suitable vein. The apparatus used consists of two glass or silver cannulae connected by a hort length (about 7 inches) of nIdia-rubber tubing, the whole being coated within and without by a thin layer of wax made by mixing hard and soft paraffin, in about equal parts. They use thin-walled, transparent, India-rubber tubing which will stand heat and which will allow pulsations to be easily felt during the operation. The cannulae they have found most useful are made of silver with a bulbous end so as to ensure their retention in the vessels without the necessity of tying or holding them in. Glass cannulae of similar size and shape may be used. The ends of these are bevelled by grinding on stone or brick to facilitate introduction. They have the advantage of being easily improvised in any ordinary clinical laboratory, but it is difficult to make a bulb of suitable size to fit tightly into the vessels, and they, therefore, require to be tied in or held—a mot tiresome process. The dimensions of the cannulae are as follows: Arterial cannula: length, 4 cm.; external diameter at point, 3 mm. The operation is done under local anesthesia. The radial artery of the donor was found most suitable, and one of the veins of the elbow or the internal saphenous of the recipient. When the two vessels to be employed are exposed they are ligated at their distal ends and a light bull dog forceps is placed on the proximal end of each. A V-shaped incision is then made with sharp cissors into each vessel. The introduction of the cannula is facilitated by making the incision in the vessel close to the ligature and seizing the flap made at its extremity with a fine forceps. The opening is thus made to gape. An analysis of the 16 cases transfused by this method shows that 1 received no blood owing to an unveindetected obliteration of the receiving vein. In 3 patients appeared beyond hope of recovery and transfusion was only undertaken as a last resort. Of the other

12 in which improvement might have been anticipated, 4 made rapid and very satisfactory progress, which is attributed, without hesitation, to transfusion. In another case the recovery was not attributed to the transfusion. The remaining 7 cases died although hopes of their recovery were entertained. The fact that improvement took place in most of the cases that died encourages the belief that under similar circumstance sin future transfusion might just tide the patient over a critical period and allow time and oportunity for further surgical treatment. Three cases transfused by this method by two other surgeons gave excellent recoveries.

Treatment of the Obesities.—Cavaillon in a recent Paris thesis, sums up many of the methods of reduction now in use. The simplest, perhaps, is to reduce the intake of food without reference to class. Some recommend a high protein ration with cutting down of carbohydrates and fats. Some cut down the liquids only. Dancel limits the safe reduction of fluids to 500-750 c. c. per diem. The general reduction treatment has been styled the famine cure. Bouchard's guide to reduction was the amount of urine excreted. Schweninger cut down the daily ration by the use of small meals, repeated when necessary, excluding as much as possible starches and fats, and limiting the intake of fluids to half a liter of water. Oertal sought to leave fats out of the dietary, while Ebstein allowed fats at pleasure, restricting especially starches and liquids. Hirschfeld was opposed to a dry diet, and did not cut down any one class of food. He sought to limit only the gross amount to actual requirements. Pfeiffer found no benefit in reducing fluids. He was guided solely by the scales. He began by cutting down starches, followed, if necessary, by reduction in fats. Germain See counselled drinking at pleasure, with limitation of carbohydrates. Debove ordered a bulky diet with a minimum of nutritive constituents necessary for life. Beginning with the milk regimen he added fresh fruits and vegetables with liquids to be taken at will. Other men like Robin and Mathieu do not recognize wholesale dietaries, but feed each obese man according to his individual requirements. It will benoted that various regimens not only differ widely among themselves, but are at times flatly contradictory.—Journal de Medecine et de Chirurgie Pratiques.

Amputations Considered from the Artificial Limb Point of View.—Openshaw, in The London Lancet, says that an artificial member can be fitted to any portion of the upper extremity, but that if even a single finger or the thumb can be preserved on the hand this is vastly preferable to its loss. No amputation through the wrist joint should be done if it is possible to leave any portion of the hand. The most satisfactory site for amputation through the forearm is at the junction of the lower and middle thirds. At least two inches of the ulna, below the tip of the olecranon, must be left or the amputation should be done above the humeral condyles. Amputation through the elbow joint is never one of election, but if it must be done the condyles should be removed from the humerus to permit the fitting of a proper socket. The site of choice for amputation through the arm lies in the zone between one and one-half inches above the elbow and three below the fold of the axilla. In the shoulder it is better to remove the head of the humerus than to leave it, but an artificial limb can be fitted to the shoulder under any circumstances by means of a moulded leather cap. Such a member can be moved fairly freely by means of attachments which are pulled upon by movements of the opposite arm. In amputations of the toes specially made boots give good function. The most satisfactory amputation about the ankle joint is the Syme and it is ultimately required in almost every case where other forms of amputation have been done previously. The best amputation through the leg is one four or five inches below the upper border of the tibia, the fibula being cut about half an inch shorter. In such amputations it is absolutely necessary to keep the knee joint straight or a further amputation may be required. If as little as one inch of the tibia can be saved it gives a better result than amputations through or above the knee joint. Transcondylar amputation gives a good result if the bone is well covered and its edges rounded off. At least two inches of the femur should be left below the small trochanter or it is almost impossible to fit any form of artificial extremity. If as much as this cannot be left the amputation should be madethrough one or the other trochanter, or the bone should be exarticulated, the latter being the preferable procedure.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

PATRIOTISM WILL TELL.

Much has been said and written unofficially about the possibility of conscripting the medical profession to supply the desired quota of physicians for the immense army that our government is now raising.

Physicians are as essential to the success of an army as munitions and if our troops are to be the deciding factor in the terrible conflict now raging in foreign lands, the surgeon general's office must be supplied with a sufficient number of doctors in the Medical Reserve Corps, to take care of the full complement of troops in the field, on transports, in evacuation hospitals and base hospitals, in concentration camps, etc.

While it is no reflection upon any man's honor to be conscripted, at the same time we feel sure that a sufficient number of doctors will volunteer their services at an early date, which means considerable to the individual so applying.

It is reasonable to suppose that those who volunteer early and receive the benefit of instruction in a medical training camp, will be the ones who will receive advanced commissions. The lowest commissions offered to a doctor is that of first lieutenant and it draws the pay of $2,000 a year; captains receive $2,400 and majors $3,000.

The principal expense to a medical officer will be his mess charges or food, and this should not be over $25 a month or $300 a year in round figures.

Whatever may be the pay, the fact remains that the surgeon general must have at least 20,000 physicians in the Medical Reserve Corps to supply the present demand, and we feel that the patriotism of the medical profession will be the stimulus that will induce a sufficient number of doctors to offer their services voluntarily.

Blanks for commissions in the Medical Reserve Corps are now appearing in medical journals or will be supplied you bye the board in your own state. If you do not know the location of this board, the editor of this Journal will be glad to inform you or send you a blank upon request.

URGENT DEMAND FOR DOCTORS IN MEDICAL RESERVE CORPS OF U. S.

Doctors from every section of North Carolina met in Greensboro on August 20th and discussed freely the problems engendered by war and many patriotic speeches were made by many of the leading medical gentlemen in this state.

The dominating note in the discussion engaged in by members of the medical profession at the meeting of the county auxiliaries of the medical session of the state council of national defense was the urgent need for trained physicians in the medical reserve corps. The doctors can contribute just as effectively to the winning of the war as the soldiers, it was pointed out, and thousands will be needed.

Dr. J. W. Long, of Greensboro, who is chairman of the organization, sent out a call for the meeting and the response was of most gratifying nature. Approximately 100 doctors were present and every one appeared to take genuine interest in the manifold problems discussed.

The visitors were welcomed by Dr. J. W. Long and Dr. A. W. Knox, of Raleigh, served as presiding officer at both sessions. Perhaps the most distinguished visitors were Lieut. Col. Robert E. Noble, of Washington, D. C., and Maj. Joseph C. Bloodgood, of Baltimore. These two men occupy exalted positions in the medical corps and their utterances were listened to with great respect.

When war against Germany was declared by the United States, Colonel Noble stated, there were 3,000 commissioned men in this country's medical reserve corps. Now the number has increased to 8,992 and many more are needed. The names of 14,500 doctors have been recommended for commissions, but many of these will not accept such honors, and it is estimated that 12,000 commissioned men will be secured from the lot. With the army and navy rapidly strengthened far more doctors will be needed in this branch of the service and the frequency with which many offers of commissions have been declined has been quite discouraging.

Earnest appeals for patriotic service in the medical reserve corps were made by Colonel Noble, Major Bloodgood and others. The desirability of impressing into service at the earliest possible moment those who are anxious to go at once and deferring the calling out of others who are less anxious to get into uniforms at this time was emphasized.

Colonel Noble said that every effort would be made to put this policy into effect.

The organization also seemed to favor the idea of furloughing medical students who are subject to the draft until their diplomas are obtained. It was pointed out that if most of these young students are called to the colors and if the war should continue several years it would result in causing a deplorable dearth of physicians a few years hence and many medical schools would be forced to close their doors. A bill is now being prepared and will be introduced in Congress shortly which would assign medical students of draft age to the medical reserve corps, whereupon the officers of that organization would be empowered to and would grant furloughs so that their medical education could be completed.

Dr. J. W. Long pleaded for more general recognition of the needs of the government for doctors in war time, such recognition to be followed by numerous enlistments in this branch of the service. It was also pointed out that efforts will be made to secure the passage of a bill in Congress which would provide for more generous distribution of officers' commissions in the medical reserve corps.

Dr. W. P. Beall read the report of the Guilford county auxiliary, reflecting excellent conditions. Reports from most of the North Carolina county auxiliaries were ready and on the whole these documents were indicative of rapid progress in providing doctors to accompany Uncle Sam's armies to the battlefields. North Carolina is expected to furnish 2,102 men for the medical reserve corps and up to the present time only 277 commissions have been accepted, so much remains to be accomplished.

THE LATE P. L. MURPHY.

The members of his well known family almost without exception will go to France at a very early date. Miss Mary Murphy, who is one of North Carolina's most charming and cultured young women, recently landed in France, having gone from New York as a Red Cross nurse. Her brothers, Drs. Alex. and James Murphy, who have achieved success in New York, are members of units and will sail for France very soon.

THE INCIDENCE OF CHRONIC DISEASE.

It is a patent truism that time brings many changes. This is singularly evident in medical practice. Possibly no change of late has been in greater evidence than in the enormous increase in chronic disease. Effective strides in the fruitful field of preventive medicine have literally wiped from the slate many of the scourges of the past. Not one death from typhoid occurred in the United States army recently, small-pox has also been thrust aside, and the terrors of diphtheria are remembered only by the older men in practice. Cleaner habits of living and a fitter regard "for the welfare of the other fellow" have paved the way for a better and a healthier world to live in. Coincident, however, with these truly salutary changes have come about the tremendous increase in chronic affections. True it is that with an increase in the span of existence come the long lasting ills of humanity. The demand for ease and luxury, with all of the Egyptian flesh-pots thrown in, bring about a host of complaints which are often hard to eliminate. It is a hard task to change the current of a man's thought. Few realize that we have to cease to do evil before we can learn to do well. The mental bias often grows worse also with the lapse of years. He becomes so "grooved" in his lines of thought and action that the proverbial mule appears rather tractable alongside. The changes often are rather greatly advanced before medical aid is requisitioned. As an instance let us be concrete. An enterprising young man decides to follow the law. By dint of hard labor and close study he becomes a successful unit in the community. He marries and his growing family still demand a life of strenuous toil. His work seems to preclude a fair share of out-door recreation. Upon arriving at middle life he decides to take out some insurance and is horrified at being turned down by what that doctor found in the sample of urine he was requested to bring. This is a case only too common and bears out the needfulness of a diet largely lacto-vegetarian with a little healthful outdoor exercise thrown in. Possibly owing to the more or less hopeless outlook in diseases of old age do we find out that there has been so little literature forthcoming on geriatrics. This is possibly a very great mistake as it will prove of increasing value as we pass towards the middle of the present century.

HEREDITY.

It has become the decision of many scientific investigators that disease is not transmissable, i. e., that diseased tendency is not passed on from parent to offspring. Yet the poet says:

"How new life reaps what the old life sows;
Where its march breaks off, its march begins;
Holding the gain, and answering for the loss;
And how in each life, good begets more good;
Evil, fresh evil!"

While man stands highest in the scale of animal life, he is not exempt from the natural laws governing all forms of life; but he alone, because of his superior intelligence, determines the law of the "survival of the fittest." There is a "biological law, by which all beings endowed with life tend to repeat themselves in their descendants." It is generally recognized that not only physiological, and physiological qualities are transmitted; but pathological, as well.

The individual bears "the traces and consequences of his parentage throughout the whole of his compound nature."

It rests upon the physician, the moralist and the legislator, the duty of carrying this knowledge to the people. The philosopher in his closet may formulate the great truths of science, but only he who lives out in the open world among the people, can make them lead to practical results. While the influence of heredity in the production of consumption, epilepsy, insanity, and other diseases, is generally admitted, the masses of the people are comparatively ignorant of the almost universal influence it has over the physical, mental and moral conditions. It is that certain mental and moral conditions rest upon a physical basis; that they are as much the result of organic conditions, and changes going on in the body, as the growth and decay. Children, when they have reached adolscence, inherit the disposition, temperament, voice, walk, stature, and other peculiar characteristics. If such peculiarities are transmitted, why should not physical strength, or physical weakness, be transmitted?

Facts, from long observation, have proven that a peculiar tendency to disease, is hereditary.

Historians, poets and physicians, of ancient times, gave general acceptance to the doctrine Herodotus believed in the heritage of moral and intellectual attributes; Homer indicates the belief, in the address of Minerva to Telemachus. The Bible abounds in recognition of the transmission of moral and physical imperfections and ills. Disease is transmitted "to the third and fourth generation of them that hate me," i. e., those who sin in the flesh, passing disease to even remote posterity."

No intelligent, observing medical man will dispute to the fact that certain vile and cruel diseases, the result of parental wickedness, are entailed upon innocent offspring! If such are entailed, why not any grave disease. Transmitted are physical conditions found in idiocy, imbecility, insanity ,epilepsy, deformity, blindness, deaf-mutism, pauperism, and criminal tendency. Our reformitories and penitentiaries are full of moral degenerates; and in a large majority of instances, the mental, moral and physical defects, and tendencies, have been inherited. Those who have studied psychology in our criminal institutions, will attest that a great majority of defectives are the progeny of degenerate parentage. So disease is thus passed from parent to child.

THE ANTI-VACCINATIONISTS.

Anti-vaccinationists may soon have a chance to try their strength with the government. The boys who are being called to the national army will be required to submit to protective inoculation, not only from small pox but typhoid as well. All modern nations now protect their armies from these diseases by systematic vaccination and to suppose that our country will be behind in this regard is to discount our appreciation of sanitary science, upon which we as a nation have prided ourselves. Certainly no small group of objectors, either in or out of the army, can be allowed to unnecessarially jeopardize the lives of our soldiers or spread disease within their ranks. Patriotism and sound business acumen require that we keep our troops in the best physical condition possible and the history of the past shows that these diseases are among the greatest enemies of armies. Germany would undoubtedly rejoice to learn of disease in the camps of the allies but our anti-vaccinationists at home can hardly afford to give her aid by helping in any propaganda to induce it. Nor will our government be likely to permit exemptions from vaccination, for our young men when entering the service will come under the rigid military regulations of the land, which provide strict measures that must be obeyed. Consequently the protests of the few misguided mas and pas of the country, including those of that great anti-vaccina-

tion center in southwestern New York, may avail nothing in checking the efforts of the government to render its brave defenders immune, so far as possible, from these diseases.

We predict that now the actual crisis has come there will be little said against these precautionary measures which experience and science alike have proven most effective. No one, not even the objectors, will care to take any risks for their sons or husbands under the crowded and more or less unsanitary conditions they will meet with.

C. K.

A CRITICAL SITUATION.

The Government is raising an immense army of volunteers and conscripts to carry on the war to a successful and, we hope, an early termination.

Every army must be supplied with a personnel of medical officers of adequate number and well trained. While provisions have been made to raise the required number of men for the fighting force, it has been left to members of the medical profession of this country to come forward voluntarily, seeking commissions in the Medical Reserve Corps.

Only a few of the total number required have applied for commissions. This means that unless immediate action is taken by the profession voluntarily, the men in the army now being organized will be without sufficent medical care. Such a condition would be more than critical and dangerous for the success of our army and the cause in which we are enlisted. The medical officer plays a most prominent part not only in keeping the army on its feet and physically fit for fighting, but in returning to the ranks a large percentage of those who have been temporarily put out through casualties.

How soon will the medical profession of the United States as a whole wake up and realize that doctors must come forward and volunteer their services to the government.

In civil life, when great casualities occur, the doctor readily offers his services and usually is the first on the scene to save human life. How much more important is it then, that in this critical situation, he should come forward and offer his valuable aid to preserve not only human lives, but the life of the nation itself.

Application blanks for commissions in the Medical Reserve Corps are being printed in many medical journals or will be sent to you by the Surgeon General's Office or can be secured from members of the Local Board of Examiners.

If you are not acquainted with such a board, the Editor of this journal will be glad to advise you. One-fifth of the active profession of the United States is all that is required to supply the army now being raised. Be a part of the one-fifth.

A FEW FACTS CONCERNING THE BIG BASE HOSPITAL TO BE LOCATED IN CHARLOTTE, NORTH CAROLINA.

The medical profession of this section of the country will be surprised to know of the immense features of this hospital. It will be ready for occupancy about the middle of September.

This hospital, we learn, will not be the usual and ordinary field hospital but really a base hospital to which troops from over a wide area may be sent. The hospital will be composed of 62 buildings, the shortest of which will be 152 feet in length. The specifications of these buildings call for an immense outlay of money. The immensity can be realized when it is known that the plumbing, wiring and sewerage system will cost one half million dollars.

There is to be more lumber used in these buildings than has been used in the other 964 buildings of the camp proper. The number of beds in these new buildings will total more than 2,000 which at the lowest is 500 more beds than will be placed in any other cantonment hospital in the country. These hospital buildings will not be shanties by any means according to the architects and builder, for instance, one of them will be, please bear in mind 720 feet more than a mile long.

Dr. W. L. Sheep, chief surgeon in charge at Camp Greene, will be commanding officer of the large base hospital located in this city.

Dr. Sheep is well known in North Carolina. He graduated at the University of North Carolina in 1904. He is originally from Elizabeth City of this state.

In this large hospital which is to be located at Camp Greene, there will be 25 physicians including specialists of note. They will serve with the rank of major captains and lieutenants, depending upon their skill and standing, as most of them will be taken from the Medical Officers' Reserve Corps and will not be regular army men. There will be about 250 enlisted men in this hospital unit.

THE MEDICAL PROFESSION OF AMERICA MUST SUPPLY ITS QUOTA OF DOCTORS FOR THE ARMY.

In round numbers, there are about 150,000 physicians listed in our medical directories. Deducting from this number 50,000 names of those who are not in practice or are physically incompetent, there are 100,000 doctors that should be available. Of this number the Surgeon General's Office requires 20,000, or one-fifth of the active practitioners, as officers in the Medical Reserve Corps of the United States Army.

The unfounded and possibly maliciously circulated reports of the casualties among the medical profession in the armies abroad have deterred many from applying for commissions. In reality the number killed on the entire Western front from the beginning of the war to June 27th, 1917, a matter of three years, was 195.

The lowest commission offered a doctor is First Lieutenant which draws in pay $2,000 a year; Captains receive $2,400 and Majors $3,000. The cost of equipment is about $150 to $175, according to the desires of the individual. As in civil life, some of us are satisfied with a $25 suit of clothes while others pay $50 and this applies to a medical officer in purchasing his outfit in the way of uniforms, blankets, etc.

The individual outlay when once in the service is principally your expenditure for food, or mess as it is called in military circles, and this will average about $25 a month, or about $300 a year, meaning that a First Lieutenant should have at the end of the year, or to send home to his family or bank, about $1,700, a Captain about $2,000 and a Major at least $2,500.

While this information is of interest to those contemplating applying for commissions in the Medical Reserve Corps, the fact remains that in America we have more than a sufficient number of doctors to adequately supply the demand of the Surgeon General's office without hardship to the civilian population.

The need of doctors is not alone for the mobile army but also in concentration camps, evacuation hospitals, base hospitals and on transports. It is of decided advantage to volunteer your services and receive the benefit of the very necessary training accorded physicians in medical training camps. It is a safe assumption that for those who receive such training and show their aptitude for the service, advancement will be rapid.

Applications for commission in the Medical Reserve Corps will be found printed in medical journals or will be sent to you by your local examining board or by the editor of this paper. Apply for your commission now. Your country needs you.

EDITORIAL NEWS ITEMS

Dr. Everett Sperry Barr, of Otterburn Springs Sanatarium, Amelia, Va., was married on August 6th to Miss Alphia Rasof of Biltmore, N. C. Dr. Barr is manager of the Otterburn Springs Sanatarium, Amelia, Va. He is an accomplished physician and we predict and hope that he will be a great success in his profession.

Faculty Changes at Wake Forest.—Recent additions to the medical faculty of Wake Forest College, N. C., have been as follows:

Dr. Thurman D. Kitchen, of Scotland Neck, N. C., to the chair of physiology and pharmacology.

Dr. Luther W. Buchanan, Buffalo Lithia Springs, Va., to the bacteriology and pathology.

The two years graded freshman and sophomore medical courses open this month.

Disposition of Red Cross Funds.—Of the $100,000,000 recently raised for the American Red Cross, it is stated that $10,000,000 will be employed in Italy, $1,000,000 in France, $200,000 in Russia, $200,000 in Roumania, and $100,000 in Armenia. The Red Cross has now at work in France a commission of experts, and a similar commission has been sent to Russia. The latter is headed by Dr. Frank Billings of Chicago. It is the purpose of the Red Cross to send similar commissions to Italy and Roumania, and also to appoint a commissioner to Great Britain.

Mecklenburg County Society Elects Honorary Members.—The regular meeting of the Mecklenburg County Medical Society, was held in Charlotte, N. C., on the evening of September 4, 1917, with a full atendance of the local profession. Among the visiting guests from the staff of the Base Hospital at Camp Greene now being established for the U. S. Army, were Col. O. G. Brown, Maj. W. L. Sheep and Capt. Jos. H. Way. Each of these

gentlemen were unanimously elected to honorary membership in the Society and with others of the hospital staff numbering twenty-five, cordially invited to attend and participate in the proceedings of the society. A watermelon cutting was enjoyed at the conclusion of the business session.

The Presbyterian Hospital.—The Elizabeth College buildings and the 12-acre park surrounding them have been bought by the trustees of the Presbyterian Hospital. The price paid was $175,000. It is understood that the leaders of this plausible and commendable enterprise will spend $15,000 or $20,000 on the buildings immediately for improvements.

This building with many modern improvements will make the Presbyterian Hospital one of the best in the country.

Dr. Junius F. Lynch, one of Norfolk's best known physicians, was recently appointed assistant chief surgeon of the Twenty-ninth division, United States army, with the rank of lieutenant-colonel. He was ordered to report at Camp McClellan, Anniston, Ala., where the Twenty-ninth division will undergo training, not later than August 25.

Dr. Lynch was appointed surgeon general of the Virginia national guard with the rank of lieutenant-colonel, January 25, 1909, and has taken an active interest in national guard affairs for many years.

His appointment as assistant chief surgeon o fthe Twenty-ninth division gives him a higher rank than any medical officer appointed from Virginia since the entrance of the United States into the war.

Dr. Lynch will be attached to the staff of Major General C. C. Morton.

Advises Keeping Medical Students in the Schools.—Dr. J. Whitridge Williams, dean of the Johns Hopkins Medical School, Baltimore, has sent out a circular letter to all medical students of that institution in which he quotes the chairman of the General Medical Board of the Council of National Defense, as declaring that while medical students will be subject to the draft as others of proper age, every proper means should be employed to keep them in the schools for the reason that there is going to be a great dearth of physicians.

He declares that many parts of England have been entirely without doctors because the young men studying to become doctors were sent to the army, and their places have not been supplied. He urges all medical students to try to secure exemption so that they may prosecute their studies. If they fail to secure their discharge after being called, and are enrolled as privates, he would have them try to secure transfer to the Hospital corps. He would also have them when called on to make immediate report of the fact to him.

Physicians and Surgeons at the Medical Officers' Training Camp at Ft. Oglethorpe, Ga.:

North Carolina: Orr, Claude V., Andrews; Miller, John F., Ashboro; Cocke, Euene R., Asheville; Aberneathy, Eric A., Chapel Hill; Bangle, James A. Charlotte; Caldwell, Jos. H., Charlotte; Townsend, Maurice L., Charlotte; Shull, J. Rush, Cliffside; Flowers, Chas. E., Columbia; Buchanan, Sidney E., Concord; Smott, Marvin LeRoy, Fayetteville; Boyles, Jos. H., Greensboro; Dees, Ralph E., Greensboro; Henderson, Thomas B., eHnderson; Burrus, John T., High Point; McAnally, Wm. J., High Point; Sloan, David B., Ingold; Vernon, J. W., Morganton; Winstead, John A., Nashville; McKay, William P., Red Springss; Wilmerding, W. E., Selma; Sherrill, Coite L., Statesville; Thompson, Alex F., Troy; Blair, Wm., Wilmington; Hunter, Wm. B., Wilmington; Thames, John, Wilmington; Lockett, Everett A., Winston-Salem.

South Carolina: Parker, Francis L., Charleston; Mobley, Marion R., Florence; Harrison, John D., Greenwood;; Major, Everett C., Latta.

Virginia: Motley, J. C., Abingdon; Powell, L., Alexandria; Ramsey, Alvah, Burkeville; Wood, Thomas M., Hampton; Firebaugh, Thos. C., Harrisonburg; Dodd, Thomas F., Lincolnia; Williamson, Thos. V., Norfolk; Haller, David A., Pocahontas; Roper, Lonsdale J., Portsmouth; Denit, Guy B., Radford; Ezekiel, Gerald A., Richmond; Peple, Wm. L., Richmond; Rollings, John A., Roda; Harris, Wm. A., Spotsylvania; Chewning, Wm. J., The Plains.

Dr. R. M. Reid, of Gastonia, N. C., died at his home in that city August 16, 1917.

Robert McDowell Reid was born in the Steel Creek section of Mecklenburg county on August 2, 1865, and was hence in his 53rd year. He was a son of S. Watson and Jane Pressley Reid. He attended the common and high school at Pineville, receiving there all his educa-

tion prior to taking up the study of medicine. He spent two years in the medical department of the University of Maryland at Baltimore and completed his medical education at one of the New York medical colleges. He also did post graduate work at the New York Polyclinic College. Immediately after graduation he settled at Stanley, Gaston county, for the state, and was a lovely professional mained there about five years and moved to Gastonia 21 years ago. Since then he has practiced continuously there, having established a very large practice in Gastonia an dthe county.

In May, 1897, he married Miss Lelia Shuford.

Doctor Reid was not only an able physician but was always identified with every forward movement in the community of which he was an important part. He was an active member of the state and county medical societies.

Dr. Reid graduated from the University of New York City in 1890. He was licensed to practice medicine in this sttae in 1890 and joined the State Society in 1903. Dr. Reid was one of the most prominent physicians in this section of the state, and was a lovely profession gentleman.

BOOK NOTICES.

A Practical Treatise on Fractures and Dislocations, by Lewis A. Stimson, B. A., LL. D. (Yale), Professor of Surmine from all the evidence what the degery in Cornell University Medical College, New York; Consulting Surgeon to New York and Bellevue Hospitals; Corresponding Member of the Societe De Chirurgie of Paris. Eighth Edition, Revised and Enlarged, with 475 Illustrations and 39 Plates in Monotint. Price $6.00. Lea & Febiger, New York and Philadelphia, 1917.

In the time which has passed since the publication of the seventh edition an increased interest in the treatment of fractures has been manifested and the accumulated experienec has shown the relative merits of various methods recently under discussion and has permitted the substitution for their discussion in the text of briefer statements as to their availability and the indication for their employment.

The principal changes and additions made in this portion of the book have consequently been in the matter of treatment, and a number of illustrations have been added. In dislocations the largest addition has been on the subject of the dislocations of the shoulder in infancy-birth dislocations and the posterior subluxations. A section in subluxations of the great horn of the hyoid has been added.

The war in Europe has brought to the hospitals an enormous number of fractures and fixed upon them the attention of surgeons to an unprecedented extent. In the course of two visits to France Dr. Stimson has been able to visit many hospitals, see much work, and note the various methods.

It is hardly necessary for the reviewer to recommend this book. The fact it has passed seven successful revisions and each edition has been quickly disposed of, and the fact that Dr. Stimson wrote the book is recommendation enough for it. Dr. Stimson is well and favorably known all over the nEglish speaking world. He has made fractures a special study, possibly for over a quarter of a century and he gained much favorable notoriety.

The 450 illustrations, and 39 plates are especially fine. These illustrations enabled Dr. Stimson to furnish the profession a book o fusual value, one that is thoroughly practical in every respect. It is full of evidences that Dr. Stimson is thoroughly familiar with the different subjects that he has incorporated in his book. The book is a large and handsome one and contains 946 pages.

A Manual of Physical Diagnosis, by Austin Flint, M. D., LL. D. Late Professor of the Principles and Practice of Medicine and of Clinical Medicine in Bellevue Hospital Medical College, etc. Seventh Edition, Revised by Henry C. Thacher, M. S., M. D. Associate in Medicine in the College of Physicians and Surgeons of Columbia University; Assisting Attending Physician, Roosevelt and Lincoln Hospitals, New York. Illustrated Lea & Febiger, Philadelphia and New York, 1917. Price $2.50.

Recent advancement in the laboratory side of diagnosis have discouraged the acquisition of that thoroughness and skill in the employment of simpler methods which were so essential to the earlier masters of clinical medicine. Even among instructors the disposition to subject every dfficulty in diagnosis to the X-ray, polygraph, electrocardiograph, etc., before the older means of examination have been exhausted, is daily developing. This tendency to adopt the dramatic, and slight the direct use of his unaided senses, doubly appeals to the student, for he naturally fails to foresee how often in

practice he will lack the advantages of such apparatus.

The particular need which this manual was intended to fill, and which is expected that it will again fill, is the demand of the student and of many graduates in medicine, for simplicity, directness, exactness, and skill in dealing with physical signs in health and diseases.

In preparing the present edition it has been the purpose of the editor to retain, and as far as possible to augment, by his additions and modifications, those features which have heretofore so strongly appealed to the student and the general reader. To this end a chapter on the Physics related to the subject has been introduced. It is hoped that it will assist the student to correlate the phenomena of auscultation and percussion with the principles he learned during his academic courses. Certain minor methods of examination, as inspection, palpation, etc., have been brought into greater prominence than the distinguished author originally accorded them.

Our knowledge in no phase of internal medicine has progressed more rapidly during recent years than in Cardiac disorders. Hence, special effort has been exerted to bring the chapters devoted to examination of the heart into accord with modern ideas. The subject of Arrhythima has been rewritten and its uusal types diagrammatically presented. On page 297 a diagram has been introduced which should enable and encourage the student to visualize the auscultatory signs of cardiac disease.

This is a thoroughly practical book in every sense. The fact that Dr. Thacher has written this book is of sufficient recommendation for it. The doctor is an expert in his line. He writes beautifully and his style is attractive.

The manual contains 381 pages, making a nice volume.

A Manual of Therapeutic Exercise and Massage Designed for the Use of Physicians, Students and Masseurs, by C. Herman Bucholz, M. D. Orthopedic Surgeon to Out-Patients, Director of the Medico-Mechanical and Hydrotherapeutic Departments of the Massachusetts General Hospital, Boston, Mass.; Assistant in Orthopedic Surgery, Harvard Medical School; Assistant in Physical Therapeutics, Harvard Graduate School of Medicine. Illustrated with 89 Engravings. Lea & Febiger, Philadelphia and New York, 1917. Price $3.50.

This book has been written to fill the need for a work on the therapeutic use of exercise and massage. While the value of these methods is generally conceded, it is equally certain that they are not yet used in practice to the extent they deserve. Because of the general neglect of these important therapeutic resources many patients who appreciate their value find their way into the hands of quacks or incompetent persons.

The correct indications for and applications of exercise and massage require not only a thorough knowledge of the anatomy and physiology, but also a good understanding of the underlying pathological conditions. It is this knowledge, together with sound judgment, that makes the competent masseur—the technic is of secondary importance; similarly the best surgeon is not necessarily the one who develops the best operative facility, but the one who combines skill with sound judgment. Throughout the book it has been the foremost intention of the writer to bring out this point as clearly as possible.

In most of the conditions treated in this book the clinical pathology has been omitted for obvious reasons; only those affections have been discussed at length which the author's daily experience has shown are not commonly understood, such as certain lesions of the shoulder, the lumbosacral and sacro-iliac regions, and a few others.

The subjects of massage of the eye, the ear, and the female pelvic viscera have purposely been omitted, while those of the nose and throat and those connected with mental disorders have been but briefly mentioned. The accurate diagnosis of these diseases requires such a degree of specialized skill that they should not be treated by the general practitioner or the masseur. Great harm may be done by the unintelligent application of massage in these regions.

This is a handsome manual of 427 pages. It is well written by an expert; and to anyone who is interested in this kind of medication or means of cure ought to read the book.

Musser-Kelly — Practical Treatment, Volume IV, by Seventy-six Eminent Specialists. Edited by John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania, and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the Complete Set of Four Volumes Sent With This Volume. Octavo 1,000 Pages. Illustrated. Philadelphia and London: W. B. Saun-

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The fourth volume of a handbook of Practical Treatment has been brought out for the purpose of giving the various original contributors opportunity of making in their articles such change or modifications as have occurred in the therapeusis of those diseases the treatment of which they have already detailed. The authors believe it possible to supplement their contributions and to make them complete, both as to detailed treatment and as to the newer and more modern procedures. In the treatment of some of the disorders, practically no fundamental or minor change has occurred in the principles as outlined originally. Such diseases have not been considered in this supplementary volume.

It has not been possible in every case to secure as contributor the author of the original monograph. Death has carried off not only the two doctors of the first volumes, but also many of the authors of individual sections. Two, Dr. J. William White and Sir Lauder Brunton, have died in the past year since rewriting their articles. Several of the original contributors have been unable for various reasons to undertake a revision of their articles. These authors have been replaced, when occasion demanded it, by others, who in order that they might be given a free hand have been asked to rewrite the article completely so that they might have the opportunity of expressing their own views upon the subject and not be compelled to subscribe to ideas and methods with which they might not be fully in accord. As a result of this plan Dr. Leonard G. Towntree has completely revised the article upon Nephritis; Dr. Maurice C. Hall has rewritten the article on Diseases due to Animal Parasites; Dr. William C. Gorgas has contributed an article on the General Aspects of Yellow Fever; Dr. Bailey K. Ashford has revised fully the section on Tropical Diseases; Dr. Charles S. Potts has considered fully Electrotherapy; Dr. John B. Deaver has reviewed Surgery of the Liver and Gall-Bladder; Dr. Joseph L. Miller has rewritten Diseases of the Blood; and Dr. Joseph Sailer has supplemented the article on Diseases of the Intestines. The editors have made such changes as seem indicated in the articles on Pertussis, Mumps and Asthma. Dr. Henry T. Chickering has collaborated with Dr. Rufus Cole in the preparation of the article on Typhoid Fever, and Dr. Walter J. Dilling with Sir Lauder Brunton in the latter's section on the General Principles of Drug Treatment. Drs. George Morris Piersol, Edward H. Goodman and Alexius McGlannan have revised those sections that they originally prepared in association with other authors.

In order to incorporate some of the more specialized new forms of treatment not included in the previous volumes, an article has been contributed by Dr. Homer F. Swift on the Treatment of Cerebrospinal Syphilis; Dr. Goodale on the Treatment of Hay Fever and Hay Asthma; Dr. John Howland and Dr. W. McKinaMrriott on Acidosis in Children; Dr. W. Gilman Thompson on Occupational Diseases; Dr. Samuel G. Dixon on the Governmental Prophylaxis of Disease; Dr. William H. Park and Dr. Charles Krumwiede, Jr., on Specific Therapy; Dr. Allen H. Smith and Dr. M. T. Barrett on Peridential Suppuration; Dr. E. B. Krumbhaar and Dr. R. M. Pearce on Splenectomy as a Therapeutic Procedure in the Anemias; Dr. A. R. Dochez on the Specific Therapy of Pneumococcic Infections; Dr. Joel E. Goldthwait on the Postural Treatment of Abdominal and Thoracic Visceral Disturbances; Dr. Charles A. Elsberg on Surgical Treatment of Diseases of Spinal Cord; and an article on Erysipelas, the consideration of which was omitted in the previous volumes, has been prepared by Dr. J. Harold Austin. Dr. Alfred Stengel has written an introductory article on the Modern Treatment of Disease. We believe that there have been incorporated in this supplementary volume all the newer methods of treatment that have been shown to be efficacious in the handling of disease, and that the new contributions will present these subjects in a convenient form to the profession, while such changes that have occurred, since the publication of the last volumes, in the treatment of the conditions previously taken up, has been fully covered by the original authors or those who have replaced them.

The fourth volume of this great work on practical treatment is equal if not superior to any of the other three volumes that are already out. The architectural arrangement is unusually good and it contains all the modern views on the subject in which it treats; they are logically and intelligently discussed. Certainly as large a work as this is and as well written as it is by the very best men in the medical profession, easily places it in the very front rank of medical literature of today.

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The Roentgen Diagnosis of Diseases of the Alimentary Canal, by Russell D. Carman, M. D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 Pages With 504 Original Illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth $6.00 net; Half Morocco $7.50 net.

Within a very few years the roentgenologic examination of the digestive tract has become an extraordinary efficient and practical aid to gastro-intestinal diagnosis. The literature on the subject, though extensive, has been widely scattered through periodicals, and, at the time the preparation of this book was begun, no effort had been made in America to collect the well established facts itno a single volume.

The writers selected and arranged in a systematic manner those things which seem, not only to be true, but worth while and especially those which they have verified by experience with a large amount of material.

They have avoided extensive descriptions of apparatus. This is wise since this subject has been fully dealt with in several comprehensive publishings. They have, however, given detail descriptions of the findings in a considerable number of cases which have come under their observation. We feel that the writers have produced a book that will be of considerable value to the medical profession, especially, those interested in this kind of work. While they have taken from literature some points, the book, however, is practically and almost completely original and the majority of the text is based upon the extensive practical experience of the authors. The reviewer has no apologies to make when comparing it with other books of the kind, he believes it is the most complete and up-to-date of any book that deals with the subject. Its 504 original illustrations have been well selected, practically no lapping or duplication of them. The artist performed his duties well.

The volume is a handsome one, nicely printed and bound. It is a pleasure to review a book like this.

Cataract Senile, Traumatic and Congenital, by W. A. Fisher, M. D., Professor of Ophthalmology Chicago Eye, Ear, Nose and Throat College, Chicago. Published by Chicago Eye, Ear, Nose and Throat College.

This is a small volume of 119 pages. It deals with the subjects mentioned in the title in an instructive and intelligent manner. It is appropriately indexed, and for the special ones who are interested in the latest views on these subjects and latest technic operations in these diseases, certainly ought to have a copy of the book.

Miscellaneous.

Cod Liver Oil for School Children.

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Diagnosis of Scabies.—Sabourand (Presse Medicale) discusses this question from the standpoint of the nondermatologist, and explains certain aphorisms that have been formulated in respect to scabies. The first is that scabies is a venereal disease. While this is not strictly a fact, it is true that scabies is contracted almost exclusively in bed, the parasite having noctambulistic propensities. The view that the infection may be acquired by shaking the hand of or working next to one afflicted is false. It is acquired by sleeping with or under the unchanged bedclothes of an afflicted person. Soldiers or refugees sleeping side by side are greatly exposed to transmission of the disease. In recently acquired scabies, inquiry as to whether the subject has slept with a person who scratches is of great diagnostic importance, skin lesions being as yet few an dnot characteristic. An affirmative answer at once limits the diagnosis to scabies or pediculosis, and the latter, if present, is easily discovered. Favorable attention is directed to the aphorism that scabies is diagnosed on the feet in the nursling, on the penis in man, on the breast in woman, and on the hands, wrists, armpits, and gluteal folds in both sexes. Scratch marks on the face and neck exclude scabies.

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An army without an adequate and well trained Medical Corps, is as impotent as it would be without ammunition. The services of thousands of physicians are needed now as Regimental Surgeons, Surgeons for Field, Evacuation and Base Hospitals, Training Camps and on Transports.

While the response from the medical profession for Commissions in the Medical Reserve Corps of the United States Army has been encouraging, many have been deterred from offering their services to the Government at this critical moment on account of the false reports appearing in the daily press regarding the number of physicians killed in action.

In reality, in nearly three years or since the beginning of the war, to June 25th, 1917, there were only 195 doctors killed on the entire Western Front. These figures are authentic, coming from no less an authority than Col. T. H. Goodwin of the British Medical Corps.

In this real hour of need, we are sure that the patriotism of the medical profession of this country will be the stimulus that will induce doctors to come forward and apply for commissions in the Medical Reserve Corps.

An application blank will be found in this issue of The Journal. When properly filled out, sworn to and accompanied by two letters of recommendation and a County Clerk's certificate that you are a licensed practitioner, it should be forwarded to your nearest Examining Board. If you are not acquainted with the location of such a Board, this office would be glad to inform you.—J. MacD.

Spirochetosis Schlerohemorrhagica. — Gabbi in La Riforma Medica, gives additional data on this affection, known more commonly as Weil's disease. A study of it as it occurred among the English troops in the Dardanelles campaign showed (1) the presence of two distinct types of febris recurrens, in one of which icterus was constant as were enlarged spleen and liver; while in the other these three symptoms were less in evidence, with respiratory disorders as a quasi equivalent. (2) Cases of "infectious icterus" with negative blood finds. (3) Ordinary catarrhal jaundice. The cases of which outnumbered considerably those of the other affections. An observer on the Belgian front in cases with spirochetes in the blood found the liver and kidneys to be involved throughout, with albuminuria. These cases showed a high mortality. Spirochetes could be found in centrifugalized unrine—in one case they persisted until the seventh week. As experienced by British troops in Flanders, Weil's disease was found to correspond throughout with the Japanese type, but pursued a milder course, icterus being absent at times. As studied in Paris an acute, severe type with icterus, frequent hemorrhages, and severe neuromuscular pains was recognized; relapses were frequent and bronchopneumonia and iritis appeared as complications. In certain cases meningitis was simulated. In mild cases with icterus but without hemorrhages, one could thing of an abortive form of Weil's disease or a simple catarrhal jaundice; fortunately the presence of the spirochete readily decides the matter. Much will therefore depend on the proper technique of bacteriology and guinea-pig inoculation. In regard to prevention and treatment the spirochete occurs in stagnant water, sewers, ditches, the trenches, etc., and also in the urine of patients. The part played by lice, etc., is unknown. As yet no definite and satisfactory method of treatment is known.

"Paralhedyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see page——this issue) which is an elegant preparation.

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At The Front--

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Copies of letters from surgeons at the front, reporting the successful use of Antiphlogistine will be mailed upon request.

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Treatment of Gunshot Wounds of the Abdomen, with a Summary of 500 Cases Seen in an Advanced Casualty Clearing Station.—Lockwood, Kennedy and MacFie (British Med. Jour.) say that the earlier the patient could be operated on the better were the results. As late as twenty hours after being wounded, operation was considered the best course, and their results justified them. Judgment in cases seen after twenty to thirty hours presented much greater difficulties; there was always the danger of increasing the damage by manipulation during the operation. If general plastic peritonitis had developed, interference was not only valueless but dangerous; they were content to insert a pelvic drain, or, if a fecal fistula was found, to mop it out carefully and drain. A few cases were operated on after thirty hours, but usually to drain a fecal collection. Autopsy was performed in some 80 per cent. of the cases which ended fatally without operation having been aattempted; hemorrhage was found as the commonest cause of death. Shock accounted for most of the deaths within the first twenty-four hours after operation. General peritonitis was rare in cases operated on not later tha ntwelve hours after being wounded, but later than that it was present in about 50 per cent. of deaths. Gas gangrene, especially of the posterior abdominal wall, was the cause of death in at least 30 per cent. of the cases. After nephrectomy and splenectomy death from embolism and infarct occurred in a small percentage of cases. In about 8 per cent. of cases operated on wounds of other parts of the body caused death. Of the 500 cases 356 were operated on and 144 were not operated on. The following conclusions were drawn: wounds of the large vessels to the liver, kidney, and spleen are fatal before they can come to operation. Wounds involving the pancreas are seldom seen on the operating table, by reason, perhaps, of the contiguity of the organ to large vessels; only one case was seen. In that the foreign body was lodged in the tail of the pancreas. Anteroposterior wounds, especially in the epigastrium, are least dangerous, and wounds fro mside to side, especially low down, are dangerous. Wounds of solid viscera are not so dangerous as those of hollow viscera. Cases that come to operation with a herniated loop of bowel exposed do badly, especially if much bowel is lying exposed; the same is true when the stomach is partially herniated. Wounds of the stomach, colon and especially the small intestine, require exploration, but in a posterior wound involving the colon the greatest care should be taken not to con vert a retroperitoneal condition into an intraperitoneal one. Wounds of the liver and kidney should be carefully determined as such only, and then treated expectantly, doing no more than exploring and cleaning up the track, and not that if probably a through and through wound produced by an undistorted rifle bullet or shrapnell ball. Avoid resection. End-to-end anastomosis is preferable to lateral when resection is essential. Wounds of the diaphragm are not necessarily fatal, nor even to be greatly feared. Careful repair gives excellent results. Multiple drainage tubes are rarely necessary, and always to be avoided if possible. Abdominal lavage is a dangerous practice. Never leave free, unprotected gauze in the abdomen. Paul's tube should be relegated to the museum, except in very rare cases. Speed in operating is essential, not only for the benefit of the patient, but because of the demands of scores of less vitally wounded men requiring attention during an active ofensive. Resection for fecal fistula is better done late when the patient is in England.

Heart Troubles.

Numerous persons, especially those of middle age and past and who live a sedentary life, suffer from worrying heart symptoms. As a rule, no organic lesions can be detected but the functional disturbances which are generally in evidence, are a source of constant alarm. Oftentimes, a person's life is made a burden by the pain and other sensations which affect the heart.

Such cases give the physician an infinity of bother. In the first instance, the patient's manner of living must be regulated, appropriate diet must be prescribed and excessive indulgence in narcotics or stimulants must be interdicted.

A regimen of this nature, however, while essential will not effect a complete cure. A therapeutic remedy which will give tone to the tired heart, but which will not act as a spur is needed. The heart requires persuasion instead of driving. Cactina Pillets will not only effect this this object but possesses remedies —that they have no cumulative action. Consequently, there is no safer heart tonic known than Cactina Pillets. In all cases of functional heart affections their use is strongly indicated, for they unfailingly bring back the heart's action to its normal rhythmical ebb and flow and the patient's fears vanish accordingly.

The Charlotte Medical Journal

VOL. LXXVI CHARLOTTE, N C, SEPT, 1917. No. 3

THE NATURAL INSTINCTS IN RELATION TO DISEASE AND PSYCCHOSES.

By John Quincy Myers, M. D., Tranquil Park Sanitarium, Charlotte, N. C.

You, no doubt, expect an apology for my allowing the wording of our subject to go as it appears on the program. It is so ambiguous you could expect almost anything. In the main no subject has so far reaching, vitl, influence upon the physical, mental and spiritual weal of woe, of the doctor's clientele, and hence the doctor himself, as this spontaneous impulse, this natural instinct, in every human being, in fact all life, to preserve self and perpetuate the species.

Two intense desires rule and govern mankind, control all man's thoughts and sorrows. They are the two appetites the human being is endowed with, the hunger for food and the craving for love.

Curiously enough, while men take great pains in the education of the young to prepare them for the gratification of hunger, the much tabooed question of sex has been excluded, in our present civilization, from every discussion.

Yet love lies at the foundation of society, it permeates, unconsciously the thoughts, aspirations and welfare of mankind. Love is glorified as the source of the most admirable productions of art, of the sublime creations of poetry, and music; it is accepted as the mightiest factor in human civilization, as the basis of the family and of the State.

We all know the power of love and the egoism of passion, absorbing all other considerations.

Virgil calls love the greatest conqueror.

Solomon sings "Love is strong as death."

When man was made in the image of God, that is when he was given a divine intelligence, a faculty and privilege accorded no other of His created beings, it was that he might have dominion over and subdue the earth, that there might be, in His great creation, an actual, visible, tangible power to curb and control all physical, natural impulses; not only in mankind himself but in all other life, both of vegetable and animal kingdoms. But this divine intelligence or attribute, peculiar only to man, did not in any sense take away from man the natural instincts, common to other animal beings, and which are just as truly God given.

Because we see it on every hand, to the doctor it is an axiom, that the paramount natural impulse is the perpetuation of the species, transcending even the powerful impulse of self preservation. Witness please the life of a Salmon fish. And to you who have been on the North Pacific Coast this is so commonplace we forget its significance. Hatched in the fresh waters of the smallest streams it finds its way into the ocean and there for three years lives with no other object in life than of finding fod and protecting itself from the enemy, attaining bodily size and strength seemingly for the climax of its existence. At the proper time and season, then, the great "run" is begun. There is then no more thought of self—no more feeding, only to reach the pure headwaters, deposit spawn, perpetuate the species and with even no attempt at getting back to the great ocean, literally lay down and die.

A perspective of its life shows every act, and movement, only a part of the eternal scheme of perpetuation of the species. The three years of activity in self-preservation only preparing for the supreme act and seeming motive of life itself.

Sexual connection among butterflies of the Bombyx family is no less marvelous. They live for months as caterpillars and sometimes for two years as chrysalids, hibernating in a cocoon in some corner of the earth or in the bark of trees.

Finally the butterfly, brilliantly colored, emerges from the cocoon and spreads its wings. It only possesses, however, a rudimentary intestinal canal for the short life which remains for it does not require much nourishment, and is only devoted to sexual connection. The female remains quiet and waits. The male, furnished with long antennae, which perceive the odor of the female at a distance, literally of miles, commences an infactuated flight through the woods and fields, as soon as its wings are sufficiently strong. His sole object is to reach the female. Here there are numerous competitors. The one who arrives first possesses the female, but expires shortly afterwards. His competitors die also, exhausted by their long flight and starvation, but without having attained their object.

After copulation, the female searches for the green plants which will insure a long life for her caterpillar offspring. There she deposits her fecundated eggs in considerable numbers and then expires in her turn like a faded flower, which, after completing the object of its existence, falls, leaving the fruit in its place.

It is an important question and all our various views, prejudices and dogmas, notwithstanding, we must admit that the importance of the subject, demands scientific research on account of its forensic bearing and its deep influence upon the common weal.

The medical man finds out, all too often, how sad the lack of our common knowledge is in the domain of sexuality, when he is called upon to express an opinion as to the responsibility of the accused whose life, liberty and honor are at stake. He then begins to appreciate the efforts that have been made to bring light into darkness.

Certain it is that so far as sexual crimes are concerned, erroneous ideas prevail, unjust decisions are given, and the law, as well as public opinion, are, prima facia, prejudiced against the offender.

The scientific study of the psychopathology of sexual life necessarily deals with the miseries of man and the dark side of his existence, the shadow of which contorts the sublime image of the deity into horrid caricatures ,and leads astray aestheticism and morality.

It is the sad privilege of medicine, and especially psychiatry, to ever witness the weaknesses of human nature and the reverse side of life. It is from the search of truth that the exalted duties and rights of medical science emanate.

I make the appeal to myself and the medical profession to lay aside modern fetichism, to get right down to brass tacks, and study and consider the natural instincts and impulses of human nature in the light of unprejudiced reason, and perhaps many perplexities will resolve themselves into simple, to-be-expected, effects of known causes.

In the remotest antiquity the worship of the generative principle was the only religion men knew. Sex worship was not confined to any one race, but was the form of worship common to all primeval peoples of the globe. Hindus, Chaldeans, Hebrews, Egyptians, Greeks, Romans, Gauls, Teutons, Britons, and Scandinavians, all shared in phallicism and yonism. The study of sexual activities and generation was the basis of ancient Hindu theology.

In the Old Testament are records of the remnants of sex worship among the Hebrews before the adoption of the cult of Jehovah. Instead of invoking the deity in taking a solemn oath, Abraham orders his servant to place his hand upon his phallus, because the phallus was still kept in its former high veneration. The slain enemy was, for this reason, deprived of his phallus. David bought Saul's daughter with a trophy of two hundred phalli, taken from the slain Phillistines. Circumcision also shows the incorporation of phallic ritual with religion.

In the same light and with the same veneration as the phallus was the yoni worshipped. In the yoni was worshipped the receptacle of life, the divine ark, within the hidden enclosure of which was contained the mysteries of life. Its interior was considered the holy of holies. The yoni was, therefore often represented by an ark, which was the holiest of all symbols in the worship of the ancients. The sanctum, sanctorum of Jehovah's temple harbored an ark.

The pyramids of Egypt, served later on as graves for the kings, but originally they were erected in honor of the feminine creative deity.

With the ancients the passion of love and the fervor of religion were closely interwoven.

The lapse of Israel into the former sex worship caused a reaction, especially in the latter days of the second temple, among the faithful adherents of the religion of Jehovah. These pious men sought the greatest virtue in chastity and celibacy and looked with contempt upon sexuality. In the beginning only individual persons took to celibacy, as did Elijah, but later on thye became much more numerous and formed different orders, overlooking entirely the tremendous strain upon the physical, mental and moral forces, such an unnatural life must carry with it. For though the final act, coitus, may be suppressed by the will, yet its emotions are irresponsible.

The neutoric nun who believes that she is embraced by one of the saints imagines she has subjugated the instinct of sex, but in reality her emotions have sexual origin. In the life of many saints, actions caused by great sexual excitement may be found. Augustinius in his confessions says, "My heart was burning, boiling and foaming with unchastity:—it was poured out, it overflowed, it went up in licentiousness."

Mankind at large is surely ruled by the dictates of love in our day, no less than

at the time of sex worship. One glance at the fashions will bear out this contention. "Gunther says: The "demi-monde" has always, since fashions were in existence, dictated them, in Rome, in Venice, and in Paris. Being Cupid's most faithful servant, fashion selects for emphasis, those parts that will serve best as the target for the winged god's arrows, and standing, thus, exclusively in the service of love, explains its modern fickleness. In previous epochs the same mode of dress was worn for centuries, as the European peasants' dress shows. The present feverishly frequent change of fashion is a pathological phenomenon betraying the diseased eagerness for ever stronger and more original sexual stimulants.

Love being thus the chief object in the lives of a considerable part of mankind, it is surprising that we have so long withheld a sane knowledge of sex and reproduction from the people and especially from women. While our ancestors were sex worshippers, we by a strange mental process, consider all such thoughts as shameful. So deeply, indeed, is the morbid sense of same associated with sexual desire that most people, especially women, disavow their propensity and hide their ardor from the world. They do not recognize that normal, well ordered, amativeness is a physiological and moral virtue, while manifestations of spurious spirituality are often induced by some perversion.

Prudery only betrays impurity, is the affectation of innocence and consequently implies guilt. To the really innocent and pure all things are pure.

The Zealots wish to persuade us that the population of the earth increases by the stork method, and these victims of a diseased imagination and perverted moral sense have succeeded in creating a false modesty which hinders free discussion. Even the physician, who is often called upon for advice about things pertaining to love, prudishly ignores the phases of the mightiest of human instincts, which is so intimately related to human happiness or sorrow. No other physical function has been treated with so step-motherly a regard and scant attention as the important instinct of the perpetuation of the species. The works on physiology and gynecology, are singularly silent upon the subject of this important sentiment and the practitioner, who so often has to deal with its pathological side, looks in vain for light in his text-books. Even with him there is a woeful ignorance, and he is not to blame for he hasn't been taught, of the fundamental difference between the male and female instinct. There are thousands of divorces, and double that many unhappy lives, because of this same shameful ignorance among our people today. How many, many, do you know who would gladly exchange their pitiable plight for a bed of invalidism and pain. With healthy moral teaching this could be avoided, and with it too our jail houses, asylums, and charity organizations would be relieved of their, present, ever increasing burdens.

The physician stands pre-eminent and alone in the position to acquire, and disseminate, this most needful help. To him is given a most stupendous responsibility, but with it, also is given the ability.

Perhaps that which worries the doctor as much or more than any other one thing is the so-called neuraesthenia or hysteria. When there is a state of steadiness, force of self-command, the person is said to possess good nerve; but where there is a condition of hyperaesthesia which makes the individual easily agitated, unusually susceptible or readily irritated and lacking in control, we are in the habit of calling such a person "nervous." Nervousness, or neuraesthenia, means without nerve strength, and is a deficiency or exhaustion, or perversion of nervous force, as well as debility of the nervous centers. If then sexuality is so important of the natural instincts, can we not claim it too as one of the most important and frequent factors in the stability of the general nervous equilibruim? We do not all begin life with the same amount of nerve capacity or nerve force, and neuraesthenia can very properly be classified as congenital and acquired. Of the causes of the acquired most authors mention first anxieties attendant upon love affairs, religious matters and the sexual passion, particularly affecting our women, while among men the business cares constantly increase the number of neurasthenics.

Of such persons a few may be cheerful and good tempered, but the vast majority are fretful, moody, irritable and depressed.

There is often a tenderness and stiffness of the muscles at the back of the neck. Palpitation of the heart and a beating or throbbing of the aorta in the region of the stomach is often annoying to these patients, and a nervous cough, which may be marked and obstinate, but without any local cause, is sometimes harassing for an indefinite period.

The most important and frequent disturbance of the special senses are disorders of sight. Among other morbid feelings of the neuraesthenic are "hot flashes" which are often a serious annoyance and sometimes attended with visible flushing of the face and hands. "The hot blush on the cheek of modesty, the ashen pallor on the face of fear, the beads of perspiration upon the brow of responsibility, and the parched breath upon the lips of embarrassment, are but passing shadows of the fitful play of vaso-motor innervation."

The most serious, and, therefore, the most important disturbances of function in neurasethenia are disorders of digestion. If the appetite, digestion and power of assimilation are disturbed, the patient may become greatly reduced in health because the tissues of the body cannot be properly nourished. This condition is very common and by far the greatest number of dyspepsias are of the nervous variety. We see the dyspepsia, but don'e even see the nervous cause, much less going still further and find the cause of the nervousness. Constipation and diarrhoea are frequent in neurotic persons. Sometimes there is some obviously manifest disturbance of the sexual function, and this is then ascribed to the neurotic diathesis when really this neurotic condition is a direct result of the sexual disturbance or perversion.

Power, of England, has investigated the relations of the sexual system to eye disease and points out that many serious complaints of the eye are caused by abnormal sexual relations and by disorders of menstruation, and the frequent association of difficult vision with sexual disorders would indicate that eye troubles were secondary rather than a cause of many of the symptoms of defective innervation.

Except for the natural instincts running amuck, the two horrible, so-called social diseases, syphilis and ghonorrhoea, would soon be under effective control. But of this phase, familiar to all advanced students of medicine, we cannot here dwell, but, with a myriad other equally important phases of the subject, leave for personal study.

We wish rather to present some thoughts not so commonly expressed, and to emphasize the fact that the subject is of vital importance from every viewpoint, that it deserves more extended study by the profession and that many lamentable conditions can and should be understood and corrected. I should like to quote from Howard, a non-medical writer, who very aptly sums up the whole matter as follows: "The animating impulse of all organic life is the sexual instinct. It is that which underlies the struggle for existence in the animal world and is the source of all human endeavor and emotion. That affinity that draws the two sexes together for the production of a new being, that overmastering, unanswered impulse, is the most powerful which pertains to the human family, and has ever been the cause and subject of man's most exalted thought. There is an intimate and unavoidable relationship existing between the mind and the sexual instinct, and, were man deprived of this instinct, all ambition, affection and endeavor, all poetry, art and religion, in fact, all emotions and achievements inspired by what we term love, would cease, and the world become cold and passionless, destitute of sentiment or aspiration, devoid of any incentive to progress or energy, while the intimate and reciprocal machinery of human society, robbed of its motive force, would come to a stop and crumble away in hopeless disorganization."

The intimate association of the sweetest and noblest with the most carnal human emotions, was observed by Marion Crawford, who wisely states, "There can be passion without love—there can be no love without passion."

This sternly practical age has made the days more prosaic and lessened the amount of true sentiment and romance; but healthy, active differential organs will ever cause hearts to grow fond and manners gentle.

Civilization has refined and educated, but the primal instinct is still the same, and there will always be marriage and giving in marriage.

When people live closer to nature, they will be less nervous.

With the Celestial fire kindled in the hearts of both wife and husband, the whole family circle will be illumed—and this can occur only with the proper functioning of the natural instincts.

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*Read before the Eighth District Medical Society, Hickory, N. C. 1917.

A FEW BRIEF SUGGESTIONS CONCERNING SOME OF THE MOTOR AND SENSORY NEUROSES OF THE STOMACH AND INTESTINES.

By George M. Niles, M. D., Atlanta, Ga.

Motor Neuroses.

Hypermotility.—This means an abnormal rapidity in the movement of the stomach, resulting in too hasty evacuation. Sometimes the stomach is found empty in a few minutes after the ingestion of a meal. Combined with this may be achylia gastrica with defective closure of the pylorus, the latter being due to absence of the acid, or simple lack of tone in the outlet. The diagnosis, which was formerly made by a test-meal, is now more easily and surely arrived at by the administration of a barium meal, and then observing the progress of this meal through the fluoroscope. The treatment consists of general tonics, dilute acid, and faradic electricity applied over the stomach.

Peristaltic Unrest of the Stomach.—This complex of symptoms brings about increased peristaltic motions of the stomach, and does not often occur as a pure neurosis. These in thin patients with flabby abdominal walls, and they are often accompanied by rolling and gurgling sounds, which can be heard some distance from the patient. This condition is often present in stenosis of the pylorus, and should not be classed as a neurosis unless the former can be excluded.

Treatment comprises constitutional, dietetic and psychic means. The body should be well nourished by bland and unirritating food, but not too much at a time, and the evening meal should be specially light. Hydrotherapy holds a useful place, either warm or cold compresses being indicated as the patient wishes. External faradic electricity may be employed, while a brief "rest cure" is of benefit. The bromide of strontium dissolved in the elixir of the valerianate of ammonia, or concentrated tincture of passiflora incarnata may be given. The use of codein or morphine, as recommended by some, is to be avoided.

Peristaltic Unrest of the Intestines.—This condition consists of marked rotary or rolling movements of the intestines, so that their vermicular motion is often visible. It is usually seen in hysterical or hypochrondriacal patients, though it is occasionally concomitant with organic troubles.

Clinically there are rolling, gurgling noises in the abdomen, easily heard, generally without pain, but most embarrassing to the patient. Stenosis of the small or large intestine must be excluded.

Treatment.—This is much like that of gastric unrest, and consists of measures to tone up the body, to quiet the nerves, and to permit a maximum of food with a minimum of work for the bowels.

Nervous Diarrhea.—This exaggerated peristaltic movement may occur in both the large and small intestine, while an increased transudation of fluid may be present due to nervous influences. The treatment is the same as in ordinary diarrhea, plus attention to underlying nervous conditions.

Cardiospasm.—In this disorder the cardiac orifice of the stomach contracts at the point of its junction with the esophagus, and, with a spasmodic closure, presents any food from entering the stomach. This spasm is probably due to some irritation of the pneumogastric nerve.

Diagnosis.—This may be made by observation of both objective and subjective symptoms. When a bougie is introduced, it is seized by the cardia, retained by the contraction a while, and then after a period of waiting, the spasm relaxes. An organic obstruction does not exhibit thi ssymptom. The diagnosis may be confirmed by an X-ray examination.

Treatment.—This is mainly the management of underlying neurotic states. Psychotherapy is important, so that the patient may swallow deliberately without that element of fear which precipitates the spasm. He should first perform the act of deglutition without food in the mouth, after which he should begin to eat very slowly. His attentions should be diverted from his esophagus, and his meals should be taken under pleasant surroundings.

One or two teaspoonfuls of liquid albolene may be allowed to trickle down the esophagus just before eating, or olive oil may be given, if preferred.

Dilatation has been advised, and Dr. Sippy has devised a practical instrument for the purpose. In dilating the spasm, the stretching process should be continued for quite a while, and the orifice should be widely dilated. Large esophageal sounds or bougies may be introduced, being left in situ for fifteen to thirty minutes. Electrotherapy is sometimes beneficial, but probably by its psychic influence.

Pylorospasm.—This neurosis is of comparative frequency, and its differentiation between mechanical obstruction and spasm is sometimes difficult.

Diagnosis.—This is best made with either the duodenal bucket or tube. The clinical picture must be taken into account. If it is found that at times the bucket penetrates the duodenum, as evidenced by the presence of duodenal contents, while at other times it fails to leave the stomach; and if, in addition there is nervous pain with increased gastric peristalsis and perhaps vomiting, the diagnosis of pylorospasm may be made.

Treatment.—This is embraced in the external application of heat, the internal administration of nerve-sedatives and lubricants, and suitable hygienic, dietetic and psychic measures. Einhorn has used his pyloric dilator with considerable success. Oil, taken on the fasting stomach, as advocated by Cohnheim, in connection with means to relieve hyperacidity, may be used to advantage.

Rumination (Merycism).—This consists in voluntarily bringing up small food in small quantities, so that it may be remasticated and again swallowed. Rumination occurring soon after meals allows the food to retain its original taste, but later on brings up the food either sour or bitter. This is more common in men than in women, there being only ten women in one hundred and forty-five cases, as reported by Presslich.

The mechanism of rumination is imperfectly understood, and is supposed to depend upon relaxation of the cardia. Heredity has been thought to play a part; also imitation, for in one instance a ruminating governess discovered later the habit in two of her pupils.

Treatment.—The patient should be forced to eat slowly, and to fight against and suppress the habit. Bitter or bad-tasting medicines are of aid, for a bad taste in rumination tends to discourage it. Psychotherapy plays a most important part in the treatment.

Sensory Neuroses.

Gastralgia.—This condition is classified under various names, some of them being cardialgia, gastrodynia or neuralgia of the stomach. It is often found in individuals of unstable nervous poise, but a positive diagnosis of this neurosis should be made with great caution, and only after logical exclusion of organic affections, underlying or even remote.

The patient complains bitterly of pain in the epigastrium, and the location of the pain is really exterior to the stomach. The paroxysm of pain come on at irregular intervals, may last from a few hours to several days, and bear little relation to food ingested. The attacks often follow nervous stress or any sudden emotion. During the attack there is hyperesthesia over the epigastrium, while eructations may be frequent and explosive.

Treatment.—This should consist of means to improve the general condition between the attacks, and embraces the usual means to accomplish this end. During the attack the patient will demand active measures, and the physician may give a hypodermic of morphine with atropine, while hot applications should be liberally applied to the epigastrium. Only in rare instances should morphine or any other potent anodyne be left with the patient to take as he desires, for such individuals readily acquire the drug habit. Many are abject slaves today whose bonds were first placed by some overkind physician, and who by the continued use of some narcotic drug riveted those bonds themselves.

Occasionally 5-grain doses of phenacetine give relief, and do not tend to cause any habit. A most valuable prescription consists of equal parts of Hoffman's anodyne and fluid extract of viburnum opulus, or cramp bark. This combination may be given in teaspoonful doses in hot water every half hour till relief is obtained. Intelligent hydrotherapy, also, is beneficial in this distressing complaint.

Hyperesthesia Gastrica.—This abnormal sensitiveness often develops without an apparent cause, and leaves as quickly as it came. The tenderness is most apparent to heat or cold, and in some individuals appears after certain seemingly harmless articles of food are taken, not leaving until the stomach is empty. Like other of the neuroses, it is most often seen in those with unstable nerves.

Treatment.—The diet list should be scrutinized and articles left off that cause pain, but care should be exercised that other equally nourishing foods are put in their place, lest malnutrition supervene. Regular diet should be resumed as soon as possible, or the patient may become morbidly introspective.

Nitrate of silver in 8-grain doses, diluted in one-fourth glass of water may be given four times daily. This should be kept up only a few days, however. A combination of strontium bromide with sodium bicarbonate and bismuth subcarbonate is sometimes most efficaceous. If between meals there is undue burning, calcined magnesia in teaspoonful doses may be taken dry or in water.

Bulimia.—This term, sometimes called hyperorexia, means a condition in

which the sense of hunger is abnormally augmented. In some manifestations of bulimia the patient's hunger is so imperative in its demands, that he becomes almost frantic if he cannot obtain something to eat. It may be associated with gastric ulcer, or cancer, hyper-acidity or neurasthenia, or may be a primary affection. This symptom is occasionally a precursor of paresis.

Treatment.—The cause, if possible, should be discovered and removed. The patient should arrange to always have food at hand so that something may be eaten as soon as the attack begins. General tonic and hydrotherapeutic measures should be inaugurated, and all the influences of psychotherapy brought to bear.

Bulimia must be differentiated from akoria, which is loss of the sense of satiety. Akoria is generally the manifestation of a deep-seated nervous lesion which demands special therapy.

Anorexia Nervosa.—This is an aversion or distaste for food without any tangible reason. Often the patient cannot explain why, but insists that any form of food is repugnant. It may be brought on by worry, anxiety or fright, and is generally found in neurasthenics, or chlorotic girls.

Treatment.—This should be strongly suggestive, and the patient should be placed where facilities are at hand for giving food forcibly. Strenuous efforts should be put forth to induce the invalid to eat, and these failing, the food should be given by gavage, by the stomach-tube, and by enema. After a few treatments of this sort the patient will find that eating is easier, and will generally account the inevitable. The rest cure with forced alimentation, where practicable, is nearly always specific. But few of these neurotics can be cured under home surroundings, and the physician should be chary in attempting such a case unless he can place the patient under such environment that complete control can be obtained.

Stomachics—the more bitter, the better—are sometimes of benefit, but medicinal treatment has but a small place in the treatment of this trying malady.

Hyperkoria, or increased sense of satiety, when nervous may be classed in the same category as anorexia nervosa, and be treated in the same manner.

Eye-Strain and Gastric Neuroses.—Dr. George M. Gould was practically the first to call attention to the connection between eye-strain and various gastric neuroses. There is no set rule for diagnosing a connection, but in obscure cases, the element of eye-strain should always be eliminated before the physician can be sure of his ground. I make it a routine practice to have the eyes of every nervous patient investigated, and not infrequently the problem is solved and the remedy applied by the oculist.

THE FLAT PELVIS.

By Hugh A. Thompson, M. D., Lenoir, N. C.

It is not the purpose of this paper to treat of the subject in an exhaustive manner, but simply to call attention to some of the more important difficulties and dangers, which may be met with, and to suggest means by which they may be avoided.

In the first place, what is a flat pelvis? Generally speaking, it is any pelvis in which the antero-posterior diameter is more contracted than any of the other pelvic measurements. This definition, however, includes a host of unusual forms of contracted pelvis, and it is not our purpose to consider any but the common types, which fall readily into two classes, viz.: the large and small, simple flat pelves. In the first of these there is no deformity, except shortening of the true conjugate, and in the second, the same proportions exist, though the whole pelvis is smaller than normal. In both cases, what we have to deal with is an abnormally large promonotory and possibly some increased thickness of the symphysis pubis. The promonotory may be the true promonotory of the sacrum, or it may be a false promonotory made by the lower edge of the last lumbar vertebra, or by the lumbo-sacral cartilage. For practical purposes this makes no difference. The point nearest the symphysis is to be considered as the promonotory.

A good deal of the truble that arises in cases of this sort is due to the fact that the abnormality is not discovered, until dystocia or obstructed labor proves that there is some unknown difficulty present.

There may be no visible sign of contraction, except the over-hanging belly, especially noticeable in multiparas, with relaxed abdominal walls, due to the fact that the head does not sink into thepelvis. The pelvis itself is apparently normal, and the external measurements may show little or no contraction. Unless the internal measurements are taken, the case may easily pass for a normal one. That such cases do pass unrecognized, with great frequency, there can be no doubt. I have personally seen a number sent to hospitals, after the outside physician had tried forceps and failed, doing no little

damage, as may be imagined. Edgar, of New York, says the statement is often made by post-graduates attending his clinics, that after several years' experience, they have never seen a case of contracted pelvis, "but," he adds, "their ratio of difficult forceps, versions, perforations, and even vesico-vaginal fistulae was fully up to the average."

The frequency of occurrence of contracted pelvis, is given by Williams, of Baltimore at 13.1 per cent. of cases. Crossen of St. Louis found it in 7 per cent. No race or class is free from it, though it is said to be more frequent in foreigners and negroes. Out of 30 obstetrical cases, which have recently come under my observation at St. Agnes Hospital, there have been five, with sufficient pelvic contraction to demand operative interference, which, in a small way, would seem to indicate its greater prevalence among negroes.

The flat pelvis represents about one-third of all pelvic contractions, so, from the figures of Williams and Crossen, we would expect a flat pelvis in three-fourths per cent. of all cases. In view of the fact that the life of the child and health of the mother are oftentimes dependent on early recognition, it would seem to be fully worth while to measure the pelvis carefully in all primiparas, and in multiparas, who give any history of dystocia. Yet simple and important as this is, it is often neglected.

On finding a flat pelvis, it must be decided: (1) Whether or not spontaneous delivery is possible, and (2) Whether or not it is desirable to give it a trial.

In case labor is allowed to go on, there are many complications that may arise, and will be more or less severe, depending on the degree of disproportion between the head and the pelvic inlet. Once the inlet is passed, there is no further difficulty from the pelvis. Among the complications to be looked for are: (1) Faulty flexion or even extension of the head may occur, because it is caught between two points, viz.: the promontory and the symphysis, and may rock out of position. (2) The head, being thus caught, cannot descend, until it has had time to mold, and, as a result, the cord frequently slips by and prolapses. (3) A finger-like process of membranes may project through the partly dilated cervix and rupture early in labor. (4) Retention of urine is common, the urethra being caught and firmly compressed between the head and symphysis.

These conditions often arise in cases, where the head is not absolutely too large for the pelvis, provided it has time to mold. In cases with slightly greater disproportion, tetanic contraction and rupture of the uterus are a possibility. In other cases, there may be over-distension, inertia and danger o fpost-partum hemorrhage.

From the above, it is evident that, in choosing the course to be followed, it is safer to err in favor of early intervention than against it, especially if the interest of the child is to be considered.

In making this decision, there are three principal factors to be taken into consideration, viz.: the history; the size of the pelvis; and the size of the child's head. The history of previous labors is helpful, but it is well to bear in mind that the first baby is usually the smallest, and that the musculature of the uterus and abdominal walls is strongest in primiparas, so that the history of a previous difficult, though finally successful labor, does not necessarily mean that spontaneous delivery is possible in the present case.

The pelvic measurements are not of great value, if considered alone, but should be compared with the size of the child's head. Most authorities agree that a true conjugate of 7 c. m. or less means that labor is impossible, in approximately 100 per cent. of cases. Ludwig and Savar found that intervention was necessary in 24.4 per cent. of cases with a true conjugate of 9.5 c. m., and, in some cases with greater contraction, in a proportionately larger number.

Apart from the diameters of the pelvic inlet, the flat pelvis offers especial difficulty to engagement of the head, because of its conformation. The axis of the pelvis forms a greater angle than usual with the axis of the uterus, and the projecting promontory forces the child's head forward, almost on top of the symphysis. Thus the expulsive forces expend themselves, not in driving the head directly into the pelvis, but rather in pushing it around a corner, so to speak.

The size of the child's head is, of course, quite as important as the size of the pelvis. This cannot be measured with any degree of accuracy, but we can compare its size with that of the pelvis fairly satisfactorily, by determining if the head can be pushed down into the pelvic inlet. If the head can be forced into the brim, labor is likely possible, because all the obstruction in flat pelvis is at the inlet. If it cannot be made to enter, operative measures should be considered.

For those cases seen some time before term, induction of labor prematurely, offers the best solution, provided the con-

traction is not marked. "The rule of weeks" given below is helpful in deciding on the date for induction:

True Conjugate	Time of induction
3¼ in.	32 weeks
3½ in.	36 weeks
3¾ in.	38 weeks

According to Berkeley & Bonney, the times here given, should be antedated at least a fortnight.

If labor has to be induced before the thirteenth week, it is not worth while, because the child will most likely die even if born alive. On the other hand, the procedure is simple and safe and, in the main, satisfactory, if it is possible to wait until the 34th week.

For those cases not seen, until at or near term, if the indications are that labor will be very difficult or impossible, it is best to perform Caesarean section at once, provided, of course, the necessary facilities are at hand and the operator competent. It is altogether desirable to make the decision, without waiting for the test of labor. The danger of Caesarean to the mother is less than the danger of severe dystocia and possibly a difficult forceps delivery, and the infant mortality is reduced from a very high percentage to approximately zero—provided the operation is erformed at the time of election, viz.: before labor begins or early in labor. It does not improve the outlook to allo wthe mother to become exhausted and the child to be seriously endangered from compression of the head or prolapse of the cord—not to mention the more serious possibilities, as rupture of the uterus,-etc. A great deal less harm will arise from performing a Caesarean, which was not absolutely necessary, than from allowing a test of labor and finally having to resort to operative procedures. If forceps have been tried and failed, Caesarean sectio nis contra-indicated.

In cases with slight contraction, high porceps may be used successfully, but only the axis-traction type should be employed, as other kinds pull the head almost directly against the symphysis. Walcher's position is helpful at the start, as it increases the diameter of the inlet by about three-fourth c. m.

Before atempting high forceps, one should be reasonably sure of succeeding, because he cannot then resort to Caesarean section. To make sure of this, it is well to be prepared to perform pubiotomy. If the forceps alone fail to secure engagement of the head, with moderate traction, the pelvis may be divided, while the forceps remain in place, thus increasing the pelvic diameters by 1½ c. m.

Version is rarely indicated. In cases with slight contraction and prolapsed cord, it may be employed—but even then it is so difficult to deliver the head, which has no chance to mold, that the life of the child can seldom be saved, so the greater danger to the mother is not justified.

Craniotomy is to be performed in the majority of cases, when the child is known to be dead. In cases of severe contraction, craniotomy may be so difficult that it is safer for the mother, to perform Caesarean, even though the child is dead. Sometimes the force of circumstances is such that it becomes necessary to destroy a living child, but in well-managed cases, this should almost always be avoidable.

In conclusion, there are four main points, which I wish again to call attention to:

(1) The importance of early examination of prospective labor cases, and of carefully measuring the pelvis at this time.

(2) The advantages of premature induction of labor, in cases of moderate contraction.

(3) The advantages of Caesarean section, performed at the time of election.

(4) The great disadvantages of the so-called "Test of Labor."

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*Read before the Sixth District Medical Society, Raleigh, N. C., August 20.

THERAPEUTIC STERILIZATION OF THE FEMALE.

By Foy Roberson, M. D., Durham, N. C.

This is not primarily a paper on Eugenics, it may however, have some ultimate bearing on that subject. The question of therapeutic sterilization of the female has on several occasions been brought quite forcibly to my mind. And that there is a distinct morbidity and mortality due to the fact that women be allowed to bear children who are physically unfit, there is no doubt. In my own limited experience, I know of cases where young women have to come to a premature death o nthis account. I shall not attempt to go too deeply into the reason for and against, but want simply to mention a few indications for and methods of therapeutic sterilization of women. For convenience, I shall divide into two classes those patients in whom sterilization may be considered.

(a)—Patients who have done their part toward procreation successfully and

in whom other operative procedure was necessary, that make sterilization also possible and attended with no additional risk. This constitutes a large class of cases, and an important one, especially those women who have to do their own work in order to help support their families.

(b)—In the other class we include patients with physical deformities presenting absolute disproportion between the passenger and the pelvic canal. Also those conditions that are so fraught with danger when the strain of pregnancy added and experience has been known to be attended with calamity. Within this group are included the tubercular patient, the one who has severe cardio vascular disease during pregnancy, the kidney group, principally Bright's disease attended with the kidney of pregnancy, is also included.

Certainly I don't mean to say that all cases should be subjected to an operation, regardless of their general conditions, but I do say that every such case deserves serious thought and consideration at the hand of men whose experience and judgment make them capable of deciding this extremely important question for their patients.

As to the operation itself, we have the abdominal and vaginal. We believe the abdominal to be the safest in the majority of cases. The abdominal methods at present in vogue for sterilizing women involves operation on the Fallopian tubes. Removal of the ovaries for this purpose is regarded as "inexcusable" if the ovaries are sound. The removal of the uterus is also unwarranted unless pathological conditions indicate the operation.

West notes the following methods of tubal sterilization:

1. Ligation of tubes. 2. Section and resection of the tubes between two ligatures. 3. Resection of the tubes between two ligatures with burial of the uterine end. 4 Section by means of cautory. 5. Bilatoral salpingectomy. 6. Resection of the interstitial canal by removal of a wedge shape piece of uterine cornu.

"Tausay (Surg. Gynec. & Obstct. 16:92, 1913)" has reported most excellent results by a method of combining the features of several operators. He resects the interstitial portion of the tube, closes the uterine end with a double layer of sutures—first of the uterine wall, second of the round ligament. He then buries the proximal end of the cut tube at a distance fro mthe uterine cornu between the layers of the broad ligament, and prevents the occurrence of hydrosalpinx by leaving the fimbriated end of the remaining portion of the tube open.

Littig (Surg, Gync. and Obstct. 15:514, 1912), urges excision of all or part of the tube, with a deep wedge shape excision of the uterine horn, and the parsuterina of the tube, the uterine defect to be closed with a musculo-muscular and a sero-serous sutures. The anterior abdominal approach is the simplest, easiest and safest."

Heineberg in a review of the methods of tubal sterilization and the failures to produce sterility says:

"There is no method of tubal sterilization which affords absolute security against conception.

"Simple ligation of the Fallopian tubes with either single or double ligatures has been followed by the largest number of reported failures.

"Excision of a wedge shaped section from each corner of the uterus, followed by a careful closure of the opening with musculomuscular and seroserous sutures has yielded better results than any other method.

"In the light of our present knowledge it seems unwise to advocate any other method than cornual resection. These conclusions are in accord with those arrived at in previous reviews of this subject."

As to the vagina operation, iDckinson (Surg., Gynec. and Obstct. 23:203, 1916), advises simple sterilization of women by cautery stricture at the intra-uterine tubal openings. This is an ingenious procedure and though not always successful is quite simple.

Persistent Coughs and Colds.

Colds that linger invariably owe their persistence to inability of the body to exert sufficient resistance to overcome germ activity. Recovery, in consequence, is always largely a question of raising the general vitality and increasing bodily resisting power. To accomplish this, no remedy at the command of the profession is so promptly effective as Gray's Glycerine Tonic Comp. Under the use of this dependable restorative and reconstructive, the appetite is increased, the digestion improved, the nutritional balance restored, and the vital resistance so raised that the body can control infectious processes, and establish a safe and satisfactory convalescence.

In the treatment of colds, therefore, 'Gray's" can be relied upon to raise the defensive forces of the organism and fortify it against germ attack.

LIST OF MEDICAL GRADUATES OF UNIVERSITY OF PENNSYLVANIA FROM NORTH CAROLINA.

The following letter will explain itself:

September 7, 1917.

Dear Dr. Register:

The University of Pennsylvania is having a very complete record of alumni of the medical school prepared by Dr. Ewing Jordan. The record includes several hundred members from North Carolina about whom the authorities of the University know nothing. Of each is earnestly desired a record of the full name, age attained, success in life, character of special bent in the profession, any honors bestowed, and any other facts which should be preserved.

I am asked by Dr. Ewing Jordan on behalf of University of Pennsylvania to inquire of you if you could publish this list in the hope that your readers would be moved to contribute any information in their power however much or little. Even a middle name where we only have an initial would be appreciated. The honor of our profession demands that we make this record as full as possible.

I regret that there is no fund to help along the work. I have offered my services and will gladly receive and transmit any data sent me.

I enclose the list for your inspection. If you cannot use it will you kindly preserve it for me?

With kindest regards and best wishes for your continued improvement in health,

Very cordially yours,
EDWARD J. WOOD.

List of medical graduates of the University of Pennsylvania of whom biographical facts are wanted or reference whence they can be had. All are registerd from North Carolina.

The list follows:

1831—Allison, John R. Univ. of N. C., d. 1885.
1841—Anderson, John Q(uincy).
1834—Armistead, Wm. Anthony.
1845—Armstrong, Spencer D. C.
1818—Atkinson, John H.
1849—Bailey, Giles P.
1843—Ballard, Chas. E.
1876—Ballard, John Charles.
1842—Banks, Wm. H. d. Savanah, 1876.
1833 Barnes, Wm. D.
1856—Baxter, Joseph J. (Currituck Ct. House, N. C.)
1842—Baxter, Oscar Fitz Allen, Wake Forest College, d. Elizabeth City, N. C.
1834—Bellamy, Samuel Crowell.
1828—Bettner, George Shonnard, Univ. N. C., d. 1860.
1849—Bizzell, Henry A.
1851—Bizzell, James A.
1835—Blackman, Josiah.
1849—Blacknall, George William, d. Raleigh, N. C., 1897. (No reply from family).
1841—Blount, Elias Joyner.
1846—Blount, H. Wistar.
1846—Blount, James Warren, d. July 15, 1903, age 80.
1835—Blount, Thomas W.
1840—Blow, Wm. James.
1834—Bond, John W.
1843—Boon, Jas. H.
1834—Bouchelle, Robert M.
1850—Boykin, Bias, educated at Wake Forest College, d. about 1854.
1812—Bozeman, George.
1849—Brandon, John M.
1867—Bray, Wm. P. (Elizabeth City, N. C.)
1840—Brent, Thos. S.
1848—Brooks, Robert.
1837—Brown, Thos. H. Univ. N. C.
1851—Brown, Wm. C.
1849—Browne, Ridley.
1833—Bunch, Jas. L.
1818—Butler, Isaac.
1850—Byers, Washington.
1811—Cabarras, Thos. E.
1854—Cain, Jas. Frederick (Hillsboro, N. C.)
1852—Caldcleugh, Alex. Blackstone (Lexington, N. C.)
1849—Caldcleugh, Jas. S.
1847—Camp, Wm. F.
1866—Casman, Wm. Jackson (Greene County)
1830—Carter, Jesse.
1849—Carter, Jesse.
1822—Carthy, Thos. L.
1813—Chambers, Maxwell. Nniv. N. C.
1831—Cheairs, Joseph H.
1818—Clanton, Joseph Todd.
1849—Clark, Kenneth McKenzie.
1842—Clements, Wm. W.
1846—Cobb(s?), Gaston D. In Mexican War.
1832—Cochran, Richard.
1821—Coleman, Littleton Hardy. d. Warrenton, N. C., June 27, 1824.
1834—Coleman, Richard.
1841—Collins, Alfred F. (Should be Allen F.)
1828—Comer, Nathaniel Moore.
1857—Coppedge, Oliver DeWill (Nash County)
1834—oCtten, John A.

1852—Cotten, Alexander S. (Tarboro, N. C.)
1831—Covington, Calvin Cole. d. September 9, 1876.
1876—Covington, Winston Hall. d. July 12, 1870.
1855—Cowell, Wm. Humphries. (Currituck Ct. House, N. C.)
1857—Circhlow, John. (Williamston, Martin Co., N. C.)
1830—Cross, Cyprian.
1838—Cross, Wm. Ciprianus, Princeton Univ. d., 1881.
1842—Crudup, Edwin Alston. Wake Forest College, d. April, 1876.
1842—Currie, Shelby Swain.
1831—Datton, Robert H.
1849—Davidson, Joseph Malcolm. Davidson College.
1845—Davis, Hugh Johnston. d. in service C. S. A.
1829—Davis, Thomas.
1848—Davis, William H.
1842—Davis, Wm. W.
1844—Dejarnett, George S.
1858—Deloatch, Henry W. (Margaretsville, Northampton Co.)
1851—Dicken, Kenelm H.
1838—Dodson, Chas. Russell.
1861—Dodson, M.—Emmett. (Greensboro)
1840—Doggett, John.
1829—Donnellan, Micahel D.
1839—Donoho, Richard A.
1839—Downey, John Alexander.
1854—Drake, John R. Univ. N. C. (Nashville, Nash Co.)
1834—Drake, Joseph Arrington. d. Shocco Springs, N. C.
1856—Drake, Nicholas Thomas. d. Wilson, N. C., February 13, 1904.
1849—Dunn, Jas. B.
1860—Dunn, Wm. Allen. Univ. N. C., C. S. A., Raleigh, d. 1864.
1830—Dunn, Wm. Bell. Univ. N. C.
1847—DuPree, Daniel, Jr. Wake Forest College, d. 1898 in Texas.
1845—Dusenbery, James Lawrence. Univ. N. C.
1875—Eagles, Columbus W.
1846—Ebron, John R.
1851—Ebron, Wm. B.
1848—Edmunds, Benjamin C. Univ. N. C.
1838—Evans, Augustus C.
1845—Evans, Stephen B.
1832—Evans, Wm. A.
1822—Faddis, Thos. J. Univ. N. C.
1852—Faison, John Haywood, Duplin Co.
1851—Faulcon, Robert F.
1843—Fessenden, Benj. F.
1840—Flanner, Thos. J.
1859—Flowers, Samuel Bryce. d. 1886, Mt. Olive, N. C.
1857—Forbes, Joseph J. (Greenville, Pitt Co.)
1844—Foster, Peter S.
1827—Freeman, Isaac P.
1837—Fink, Lorenzo.
1857—Fuller, John L. d. 1862 (Leesburg, Caswell Co.)
1819—Gatling, John.
1853—Gibson, John Adolphus (Concord, Cabarrus Co.)
1829—Giles, Milo A.
1826—Gilliam, James Thomas.
1834—Gilliam, John R.
1838—Glass, Wm. H.
1824—Glenn, James R.
1854—Glenn, Robert W. (Gilmer's Store, Guilford Co.)
1855—Graham, Alfred Hamilton. (Peattie's Ford, Lincoln Co.)
1855—Green, Benj. Thorpe, C. S. A. (Oak Hill, Granville Co.)
1856—Green, Wm. Joseph. (Rolesville, Wake Co.)
1828—Gregory, Francis Roger. d. 1854.
1861—Gregory, Francis Roger. (Sassafras Fork, N. C.) d. Stovall, N. C., 1899, C. S. A.
1859—Gregory, G.—Chas. S. (Enfield, Halifax Co.)
1840—Gunn, Allen.
1812—Hadley, John L.
1826—Hall, Isaac. d. 1858. Univ. N. C.
1837—Hardison, Handy.
1850—Hardy, Wm. A.
1859—Harris, A(lgeron?) S(idney?). (Louisburg, N. C.)
1843—Harrison, Benj. S.
1845—Hart, Franklin. Univ. N. C.
1806—Hart, John.
1852—Haughton, Edward Buncombe. (Columbia, Tyrrell Co.)
1840—Headen, Isaac Brooks. Univ. N. C., d. 1852.
1851—Henderson, Francis M. Princeton Univ.
1831—Henderson, Lawson Frank. Univ. N. C.
1827—Herndon, John Rhodes.
1855—Hester, Jas. Horace W. (Oxford, d. 1875)
1857—Hicks, Benj. Blount. (Oxford, d. 1874)
1827—Hicks, Jas. Henry.
1861—Hicks, John Henry. (Faisons, d. 1883)
1838—Hicks, Wm. Raven. d. Oxford, 1876.
1853—Hill, John W. (Kenansville)
1849—Hill, Samuel P.
1858—Hines, Jas. M. (Marlboro, Pitt Co.)
1855—Hinton, Gerard James (d. Ches-

ter, S. C., 1858, Wake Forest College, Raleigh.)
1819—Hinton, Robert (d. October, 1828, at Halifax, N. C.) Univ. N. C.
1859—Hobbs, Isaac Middleton. Wake Forest College (d. March 9, 1888, Clinton, N. C.)
1831—Hogan, Wm. L.
1852—Holmes, Allmand. (Clinton, N. C.)
1837—Holt, Michael Wm. Univ. N. C. d. 1858.
1847—Hooker, Octavius Wright. Univ. N. C.
1845—Hooks, John James.
1827—Horn, Josiah R.
1837—Hoskins, James H.
1848—Houston, James Hiram. d. 1870.
1845—Howard, Henry A.
1858—Howard, John, Maj. C. S. A., killed in battle, September 14, 1862, Tarboro, N. C.
1844—Hughes, Wm. H.
1849—Hunter, Edwin Smith. Wake Forest College. d. June 27, 1879.
1845—Hutchings, John W.
1856—Ivey, John L. (Weldon, N. C.)
1856—Jackson, Bailey. (Elizabeth City)
1858—Jackson, Cartwright C.
1821—Jackson, John Skinner. d. 1832 U. S. Army.
1855—Jacobs, Samuel. (Leesburg, N. C.) d. 1855, Wake Forest College and Univ. Va.
1846—Jacobs, Wm. Stephen. d. 1849.
1855—Jeffreys, Chas. W. S. (Pacific, Franklin Co.)
1836—Jeffreys, Jacob H.
1848—Jeffreys, Leonidas A.
1828—Jeter, Henry M.
1815—Jiggitts, David E.
1818—Jiggitts, Lewis Meredith.
1852—Johnson, James Madison. (Edenton) d. Baltimore, Jan. 9, 1896.
1845—Johnston, Wm. L.
1841—Jones, Adolphus D.
1821—Jones, Isaac Newton.
1858—Jones, Wm. Joseph. (Oxford)
1825—Jones, Willis.
1840—Justice, John R.
1855—Kelly, George L. or I.
1825—Kerr, Samuel.
1857—Knight, Chas. W. (Tarboro).
1869—Knight, Joseph L. (Tarboro)
1822—Lane, Levin Bryan.
1832—Langley, Wm. S.
1859—Laurence, Adolphus Alexander. (Statesville)
1858—Leach, John Sanders. (Raleigh)
1845—Leary, Wm. James. d. 1890, Wake Forest College.
1876—Lee, Henry Wilder. (Raleigh)
1858—Leecrafet, LaFayette Fuller. d. Beaufort, N. C., 1864.
1843—Leggett, Nazareth. Wake Forest College. d. Holly Springs, Miss.
1854—Len, Jas. T.
1861—Lesesne, Chas. (Elizabethtown)
1869—Leslie, James Addison. (Raleigh)
1841—Lewis, Willis (W?)
1849—Lewter, John T.
1840—Lindsay, Wm. Dillon.
1815—Long, Alexander.
1845—Lowther, Samuel J.
1813—Lyne, Henry.
1827—McAden, Henry.
1840—Jones, Adolphus D. (Granite Falls)
1843—Wilson, John R. (Harrisburg, N. C.)
ville)
1844—Savage, Owen Badger (Gatesville)
1845—Hooks, John James. (Waynesboro, N. C.)
1845—Lowther, Samuel J. (Sunbury, N. C.)
1845—Pierce, Alexander B. (Weldon)

Method of Spread of Gas Gangrene Into Living Muscle.—McNee and Dunn (British Medical Journal) made extensive examinations of freshly amputated extremities and of cadavers within one or two hours after death to determine the mode of spread of gas gangrene into healthy muscle. They also conducted a series of animal experiments with results which confirmed their findings in man. They point out that gas gangrene is a disease of dead muscle, in which the bacilli live a saprophytic life with the rapid destruction of the dead tissue, producing gas and highly toxic fluid. The rapid spread of the disease from the originally infected devitalized muscle is found to be due to the anatomical structure of the muscles. These consist of long individual fibres surrounded by sheaths which are very readily detached with the formation of potential spaces into which the toxic material from the infected region passes. This detachment damages the blood supply and the toxic fluids complete the destruction of the vitality of the muscle. With this the organisms find fresh devitalized muscle and the process progresses until the whole muscle originally affected is destroyed, or until all are destroyed when more than one is infected. In the case of gas bacillus infection below the site of a complete lesion of one of the main bloodvessels all of the muscles are devitalized together and the disease spreads generally throughout the part.

On Gunshot Injuries of the Chest, with Special Reference to Hemothorax.—Bradford, in The British Medical Journal, discusses more especially the cases observed from the third or fourth day up to about three weeks after the occurrence of the injury. Hemothorax is the most common result of a chest wound, both pneumohemothorax and pneumothorax being relatively rare. In a series of 328 cases of gunshot wounds of the chest only eight cases of the former and four of the latter were observed. In a study of the morbid anatomy of wounds of the chest made by Henry and Elliot in a series of 100 cases observed in a base hospital in France, dealing only with cases that succumbed from the third day to the third week, one of the most striking facts ascertained was that within these limits of time death from hemorrhage as a result of a wound of the chest was very rare. In a series ofseventy-eight fatal cases of simple hemothorax there were seventy in which either infection or an additional visceral complication, or both, were present. In the remaining eight cases in which death might have been due to hemorrhage, purulent bronchitis was present in three, and in four cases no record existed as to whether sepsis was present or not, thus leaving but one case in which hemorrhage alone could be definitely asserted to be the cause of death. Septic infection is therefore by far the most frequent, and heretofore the most important cause of death in cases of hemothorax that survive the first few days immediately following the wound. Secondary hemorrhage is also extremely rare, there being only three such cases recorded in this series of 100 cases. In the treatment of sterile hemothorax, if the amount of bloody fluid is small there is no need for any special active treatment. If the effusion is at all large early aspiration may be required to relieve the distress. The fluid should be removed by aspiration about the end of the first week. Aspiration with oxygen replacement is better than simple aspiration. Further, with oxygen replacement practically all the fluid in the chest can be removed at one sitting. For practical purposes it is not necessary to measure accurately the intrapleural pressure; it is sufficient to regulate the introduction of oxygen by the presence or absence of symptoms. Free drainage is required in all cases of infected hemothorax, and it is of the utmost importance that this should be provided as early as possible as the organization of the deposit of lymph on the visceral pleura produces a great impediment to the rapid expansion of the lung after the removal of the fluid, and this organization proceeds rapidly in cases in which delay in operating takes place. Removal of the infected fluid by free drainage is, however, not sufficient treatment in all cases; the inflammation in the pleural sac and the septic clots must be treated by the local application of some efficient antiseptic applied either by periodical washing out of the cavity or else by the instillation method and the Carrel-Dakin technique. Recently the latter method has been applied with success to cases of infected hemothorax, and a few cases have been so successfully treated that the operation wound for the excision of the rib has been closed by secondary suture before the evacuation of the patient for England.

Functional Cardiopulmonary Disturbances Following Wounds of the Chest.—Sergent (Bulletin de l'Academie de Medicine) points out that manw subjects wounded in the chest later complain of discomfort in breathing, palpitation, and thoracic pain in the absence of all injury to the heart, pericadium, lungs, pleurae, and mediastinum, as shown by complete physical and X-ray examinations. In 10 cases he was led to ascribe these disturbances to injury of the cardiac plexus and phrenic by the missile, whether the latter has remained in the tissues or passed out beyond. Thus, in a man struck four centimetres above the left nipple by a rifle bullet, which passed through to the muscles of the back, complaint of the discomforts referred to was made to Sergent about three months after the injury, and the writer noted a typical left phrenic neuralgia, with immobility of the left side of the diaphragh, pulse acceleration on the least movement, and pupillary inequality. X-ray examination proved negative. Soon after there supervened thyroid enlargement, persistent tachycardia, tremor, and exophthalmos, all of which gradually subsided under high frequency currents and hematoethyroidin. The nine other cases were likewise characterized by instability of the pulse and respiration, with constant dyspnea, increased by the slightest exertion, together with phrenic neuralgia in three instances, pupillary inequality in four, and symptoms of Graves's disease in five. Nearly all these patients had received an injury of the cardiac plexus, as shown by the X-ray or estimation of the course of the missile by comparison of the wounds of entrance and exit.

A Contribution to the Microscopical Histology of Malaria.—Dudgeon and Clarke, in The British Medical Journal, were led to make this investigation because during an epidemic of malaria in the Salonica Army in 1916 sudden death was not uncommon, and the committee which was appointed to inquire into and report on the fatal cases noted that a large porportion of the patients died within twenty-four hours and no less than 57 per cent. died within the first two days of admission to the hospital. Further, collapse and even sudden death occurred as an initial phenomenon of this disease. The observations presented include the cerebrum, cerebellum, medulla, heart muscle, adrenal glands, liver, spleen, kidneys, and intestinal tract. Examination of the heart showed, in addition to fatty degeneration, blocking of the capillaries with infected red cells in most instances. The microscopical changes in the adrenal gland were very numerous. The most constant alteration from the normal histology was the diminution in the lipoid substances. This loss occurred in all layers of the cortex. The chromaffin substance i nthe medulla was also greatly reduced in amount. The cerebrum, medulla, pons, and cerebellum were examined from three cases and in all three the lesions were both severe and widespread. In each case the patients died in coma. Thrombosis was present and was more marked in the white matter. The spleen, liver, and kidneys showed existensive fatty degeneration with areas of necrosis. Thrombosis of the capilaries and arterioles in many of these cases was a striking feature. In those specimens in which thrombosis of the vessels was present foci of necrosis predominated. The hepatic changes were numerous. The deposit of pigment, which has long been regarded as a constant characteristic of malarial fever, was present in every case. The bile examined in some of the fatal cases of malaria by Captain Clarke was found to be sterile, and in thirty-five cases at a mobile laboratory the authors found the blood sterile in every case. Captain Iworthy in one of the laboratories in Salonica made blood cultures in eighteen cases of proved malarial fever with negative results in each instance, while samples of the bile in eight fatal cases of malaria and cultures from the spleen in six cases were found to be sterile. The widespread changes occurring in the tissues and the rapid spread of the infection in so many cases on the one hand and the cardiovascular phenomena on the other have led some to believe that this outbreak of malaria is different from all others. It has been suggested that this difference depends on the virgin soil which has been placed at the disposal of the parasites, or on the parasites, or on the quinine. The writers recall Sir Ronald Ross's remarks that "some authors consider that there are two, if not three, varieties or species of malignant malarial parasites" with which they feel dispose dto agree.

Treatment of Tuberculous Eyes by Local Application of Tuberculin.—Ellis and Gay observe, in The British Medical Journal, that tuberculous affections of the eyes seem especially prevalent in children. In the cases coming under the authors' notice every superficial part of the eye and appendages has been found to be tuberculously infected. The large proportion of girls affected—thirteen boys to twenty girls—suggests that dust is domiciliary rather than external. All the thirty-three cases so far treated have proved curable in any time from six weeks to three months, and so far only one relapse has occurred among cases in which the treatment has been completed. The treatment consists in instilling tuberculin into the conjunctival sac directly, in various dilutions of increasing strength. First in every case the cutaneous test is made on the forearm. This not only aids in the diagnosis but records the susceptibility of the patient to tuberculin. Cases are by this means classified into definite classes: (1) Hypersensitive, giving a marked reaction to a solution of tuberculin from 1 in 500 to 1 in 10,000; (2) sensitive, reacting doubtfully to 1 in 500; (3) subsensitive, giving a marked reaction to 1 in 10 T; (4) insensitive, giving either no reaction or a very slight one. Tuberculin should be used differently in each of these types as would naturally be expected. As a rule the cutaneous reaction in eye cases demonstrates that they belong to the sensitive and hypersensitive classes, as would be expected, since they generally belong to the group of double infections. The authors describe the dosage in each of these classes of cases.

Principal Disadvantages of Salvarson. —Werther enumerates the following: accelerating the course of syphilis; causing an increased incidence of neurorecidives, and causing focal reactions in the central nervous system.—Muenchener Medizinische Wochenschrift.

The Leucocyte Count as a Guide to Treatment of Wounds.—According to The British Medical Journal, Stabsarzt Lindemann has drawn attention to the great practical value of the leucocyte curve as an indication for surgical interference in gunshot wounds. In such wounds the initial infection was combatted in the body with a twofold result. On the one hand, where resistance was good, the activity of the infection was supressed either permanently or for a varying period—latent infection. On the other hand, where resistance was weak, the activity of the infection persisted—manifest infection. The treatment, conservative or active, to be adopted depended on the early recognition of the nature of the infection, whether latent or manifest. As an illustration, two cases of gunshot fracture are described in which an immediate operation was performed for removal of fragments; in both there was a similar rise in temperature and pulse frequency; subsequently in the one case a suppression of the active infection, in the other its continuance, necessitating another operation.

The clinical discrimination between such cases involved a loss of several days, and the writer claims that this could be avoided by making use of the leucocyte curve. or this purpose itwas necessary that there should be a daily record, the curve being most conveniently plotted on the temperature chart. The initial leucocytosis was extremely rapid; and was completed within a few hours from the wounding, the leucocytes increasing two to fourfold. During the next twenty-four hours the leucocytes has rapidly diminished, becoming normal, or almost normal, in number. f the infection had been rendered latent by this reaction no further increase took place. If, on the other hand, the infection proved to be manifest, a second sudden or gradual leucocytosis occurred. Lindemann embodied these conclusions, which were based on a study of his cases, in four types of leucocyte curve:

(a) Typical of latent infection. irst count four hours after wounding; high leucocytosis (34,000). A few hours later almost normal; further course normal.

(b) Typical of latent infection, but first count twenty-four hours after wounding. No leucocytosis.

(c) Manifest infection. First count two and a half hours after wounding. Hligh leucocytosis (30,000). After a few hours a fall almost to normal, with, in the next twelve to thirty-six hours, a second rise, persisting until operative interference; then fall to normal.

(d) Manifest infection, but first count twenty-four hours after wounding. No leucocytosis (the initial rise and fall not having been registered); a few hours later a sudden rise in the curve, persisting till relief by operation.

The indications deducible from these curves were as follows: High leucocytosis at first denoted the initial reaction; its rapid fall to the normal without further rise indicated conservative treatment. Low leucocytosis on the second day did not denote the absence of manifest infection. A steep rise on the second day strongly suggested a manifest infection, and its continuance confirmed it. A relatively low leucocyte count in spite of a manifest infection denoted a comparatively non-virulent infection.

Digitalis in Auricular Fibrillation.—Cushnye, in The London Lancet, points out the now well known fact that digitalis is most potent in influencing the rate and rhythm of the heart in certain cases of auricular fibrillation and seeks to explain this specific action of the drug. The doctor recalls the fact that the drug is capable of slowing the heart by stimulation of the vagus centre, but that this does not account for its slowing action in cases of auricular fibdillation, in which he has shown it to act directly upon the auriculoventricular bundle. Dr. Cushny has observed that in the excised heart of animals, perfused with Ringer|s solution for some time and thrown into auricular fibrillation by electrical stimulation, digitalis similiarly slows the ventricular rate through a direct action on the bundle of His. He also finds that digitalis is capable of acting in the same manner in hearts similarly treated but not caused to fibrillate. These animal hearts are debilitated and starved through want of adequate oxygen and nutriment, and it is onl yon such hearts that digitalis exerts this type of local action. In the condition of auricular fibrillation in man it is reasonable to believe that the heart is also more or less rebilitated through exhaustion and inadequate supply of oxygen and nutriment, and it seems plausible to believe that this is the cause of the special type of digitalis action observed. In further agreement with the animal experiments he cites two cases in man without auricular fibrillation in which the heart responded with block through action of digitalis directly on the bundle of His.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

THE PASSING OF A GREAT MAN—PROF. DR. THEODORE KOCHER, THE EMINENT SURGEON, OF BERNE, SWITZERLAND.

On July 27th last, the medical profession throughout the world suffered a great and irreparable loss in the death of Professor Dr. Theodore Kocher, the famous chief surgeon of the "Inselspital," Berne, Switzerland, and professor at the medical faculty of the Berne University —to which posts he received a call by the Government of the Canton of Berne in April, 1872.

Professor Kocher's many pupils have ever admired him as the greatest living surgeon and on two occasions has the medical world in general also paid him this compliment. First in the year 1904 when the International Surgical Society was founded, the meeting of Surgeon Delegates elected Professor Kocher chairman of the first international Congress of Surgeons at Brussels. On the other occasion, in the year 1910, he was awarded the Noble Prize for his remarkable achievements in surgery.

His specialty was goitre and he has been generally known as an exceptionally successful surgeon for this complaint. This formerly most difficult operation has been improved and simplified by him and some of the foremost physicians are not reluctant to acknowledge that they are operating after Kocher's method.

The first successes brought him patients from all directions of the globe and noble families, including the Imperial Russian Court, called him frequently to their aid. Numerous brilliant offers reached him from foreign countries, but he refused them all, in order to devote his science and activity to the University of his native town. In 1912 he celebrated the fortieth anniversary of his Professorship in midst an assembly of medical celebrities who had especially come to Berne to do him homage on that day.

On the occasion of the Surgical Congress of 1910, he surprised his audience—which consisted over 1,200 surgeons from various parts of Europe—when he casually mentioned that he was basing his facts upon some 4,000 operations he had performed for goitre. And humanity is not only indebted to this talented man for the discoveries he made in this field but also for the many lessons he drew from his experiences and observations in other and still more complicated diseases.

Everybody is acquainted with the phenomenal effects of Rontgen's invention in cases of broken bones. Professor Kocher's experience and science enabled him to write on the treatment of fractures even before Rontgen and there was nothing to be altered or added in his treatise of this subject. Professor Kocher's technic has led to perfect success in stomach and intestinal surgery; and new methods which he introduced are now employed in cases of epilepsy. He also facilitated the diagnosis of injuries to the brain and spine and intestinal ruptures are operated after his directions.

Professor Kocher is therefore universally acclaimed as a man to whom the world is indebted for discoveries and progress in almost every section of surgery. He was a man who was never precipitate in his diagnosis of a case; he knew the value of careful and repeated observation and insisted upon absolute certainty in each individual case.

It consequently rarely happened that a case of illness which was brought to his attention could not be explained and his patients felt immediately that they were in the care of a man from whom they would receive the maximum of human help.

Professor Kocher regarded his profession as his very life and his holidays were invariably devoted to theoretical work. He remained a perpetual wonder to his assistants and his pupils who could not always realize how this man could find his life's satisfaction in constant work. He was not only an instructor in surgery, but he implanted into his students that sense of duty which sacrifices all to the cause of the patient. He refused in his clinic to distinguish between important and unimportant matters, for every detail held some importance for him and he never failed to impress this upon his pupils.

While many a man would have retired long ago, Professor Kocher remained active to the very last. At the age of 76, shortly before he died, he lectured and operated with youthful vigor and those who knew him had to admit that he displayed the same unbounding energy at the close of his career as he did when he started his work in the Swiss capital. Professor Kocher kept not only pace with the progress of science and time, but he was even ahead.

Switzerland mourns him as one of her most brilliant sons and the medical profession in general and many individuals in foreign lands who have received help from this great surgeon will pay a grateful tribute to his memory.

APHORISMS.

The Physician.

The successful physician is the one who does honest, careful and conscientious work.

It takes politeness to get patients, and faithfulness to hold them.

A good doctor should be a good collector.

It pays to give a square deal. Money invested in medical periodicals pays better than if invested in books; one is always fresh, and the other soon becomes stale.

No one works more for the public good than does the doctor; the church not excepted.

Keep abreast of the times, as may be accomplished by reading current medical thought.

On the basis of achievement, medicine need not hide its face.

A poor practitioner carries a lean pocketbook.

A quack has fools for clients. An honest physician inspires confidence.

If a doctor keeps his office well, his office will keep him; and Franklyn said: "If a man keeps his shop well, his shop will keep him."

A studious doctor will not lag behind.

A correct diagnosis is more than half the cure.

A good character is essential to success; but a bad reputation is doomed to failure.

Don't blow your horn yourself; let others do it.

Be alert, industrious, prompt, and efficient.

"There is no excellence without great labor."

Too many doctors don't read and think enough.

A haphazard diagnosis is only guess work. Use sound judgment.

Talk less and think more.

A doctor should have clean hands, and a clean heart.

Slovenly clothes cover a slovenly doctor. Be neat, but not foppish.

Be chaste in speech, and a gentleman always.

Don't be loud-mouthed. Talk softly, yet firmly.

When entering a sick chamber, don't walk like you have on cow-hide boots. Don't rush in; but go in quietly.

Don't stick a thermometer in the mouth as soon as you get to the bedside; but wait till the flurry subsides.

Use tact, and study physical signs first. The countenance often affords a clue to the disease.

Be dignified, but not cold.

Be patient and painstaking.

Be careful, and don't write too many prescriptions, and don't order too much.

Simplify your treatment, and don't change prescriptions unless urgent. Stability is the thing.

AMYLACIOUSNESS (?)

How is that for a word?

Amylacious indigestion. It is surprising how many persons can't digest starchy foods. Gaseous fermentation becomes severe, as a result. Not only in the stomach, but in the intestines as well. There is a feeling of distention and eructations, as well as discharge of intestinal flatus. Frequently there is considerable abdominal pain. The stomach's gaseous distention interferes with the heart action, causing arythmia, and some dyspnoea. Before starch can be rendered utilized for food is only when it is rendered soluble, which is accomplished by the saliva and the pancreatic solution, when it is converted into C-2, H-12, 0-6, or dextrine. Without such change, starch will pass through the entire alimentary canal, and be voided unchanged. Thus changed, it passes to the portal vein, and is conveyed to the liver. Here it is changed back again to glycogen, or "animal starch," which is given off from the liver, as sugar. It will thus be seen that a very important part of the process of digestion of starch is accomplished in the mouth, or during the passage of food into the stomach. Any portion of a meal of starchy nature, which escapes conversion, remains unchanged in the stomach, because diastase is active only in an alkaline medium, and the acid of the stomach destroys it. Starch, therefore, as such, in the stomach, is a foreign element, and thus embarrasses stomach digestion until it is carried off into the intestines, where it meets the alkaline secretion of the pancreas and duodenum. What failed higher up is accomplished in the duodenum. The remedy where the starch digestion is imperfect is to incorporate diastase with the ingesta. P. D. & Co. make "Taka-Diastase," which "fills the bill." This is no ad.

PAST AND PRESENT.

There are physicians who can hark back to the time when the crudest and most nauseous medicines were administered to the sick. Directions, infusions, compound cathartic and Cook's pills; vermifuges, with disgusting oil of chenipodium; and tinctures from roots macerated for two weeks; "spring" bitters, with almost everything in them; hot teas for fever; no cold water; heavy poultices for inflammations, made from hops or flaxseed; fly blisters; hot water sponging for fever; zymotic diseases plied with saffron tea; and the amount of medicine given in typhoid fever should have been fatal, but some survived the treatment.

Today, with our alkaloids, triurates, elixers, capsules, conceals, and everything so eligible and palatable, that taking medicine is almost a luxury.

In the "eighties," great stress was laid on "Grindelia Robusta," Yarba Santa, KavaKava, Quebraca, Chian Turpentine, Duboisin, Cascaria Amarga, Berberis Aquefolium, Manaca, Goa Powder, Coto Bark, Jaborandi, Jamaica Dogwood, and numerous other preparations and medicinal agents, which have long since passed into a state of "innocuous desuetude." As the pharmacist, and the pharmaceutists advance, the practice of medicine becomes more scientific, accurate, and successful. The debt the medical profession owes to these manufacturing pharmacists can never be paid. F.

APOTHEGMS.

Treatment of disease should be simple and definite.

Don't hurry an examination. Wait for composure of the patient.

Be quiet and gentle.

Sterilize your thermometer in the presence of the sick. They are squeamish about clean thermometers! Much more so, if they suspect they are not clean.

Don't depend on one minute thermometers. There are none!

Don't tell a patient what kind of a tongue he has; and never speak of a foul breath. It's enough for you to know it.

It isn't necessary to tell what remedies are employed.

Pay no heed to anti-calomel prejudices. Give it when indicated.

Don't administer big doses of anything. Beware of the doctor who orders a half-teaspoonful of castor oil. They will never forget him. The days of heroic dosage are past. Fastidious patients prefer small doses, frequently repeated. Old-time big dose doctors are back numbers.

Use delicacy and modesty in examining females. Remember their sensitive natures. Doctors sometimes offend by not regarding female modesty. The popular accouchier is the one who respects modesty. Some gynecologists ruin their reputations and lose business by immodesty.

INCOMPATIBLES.

If a physician would escape the danger of prescribing incompatibles, he should avoid combining too many, or very many ingredients in one prescription. It is really important for a physician to be a pharmacist. At all events, he should know enough to avoid prescribinb incompatibles. The writer has seen an mantle-piece covered with half emptied boxes of powders, capsules, and but a few doses taken from four ounce vials. The crying need today is simplifying the prescriptions, and limiting the number as much as possible. If it were not for the proprietory preparations, it would be impossible for some physicians to prescribe an eligible and compatable combination of drugs. The old-time bedside dispensing was a boon to the sick, as well as saving time and money to them. Enough medicine was prepared at one visit to last till the following one. They certainly escaped the expensive graft of the city druggist.

The Homeos teach us a lesson with their ready dilutions and medicated tablets. The actual cost of such medicaments is almost nil. However, it is without its popularity and success, in a measure. Let us learn a lesson from them, in the simplicity of treatment, as well as bedside prescribing, so far as possible. In these days, when we have so many concentrations, it can be done.

Lack of Studiousness.

In this exciting, hurly-burly age, the habit of studiousness among many medical men, is common. This is an age of discovery, and rapid advancement in all lines; and in no department is it more conspicuous than it is in the science of medicine.

For a physician to be negligent and indolent in these times is inexcusable. He is unjust to the sick if he doesn't keep abreast of the progress of today. With the numberless medical journals,

and multiplying of new remedies, and modes of treatment, he should read and investigate, constantly. There is a shameful lack of knowledge.

EDITORIAL NEWS ITEMS

Dr. Oren Moore has been elected city physician of Charlotte at a salary of one hundred dollars per month.

Dr. C. A. Misenheimer begs to announce that after September 1, 1917, his practice will be limited exclusively to general surgery, No. 210 North Tryon street, Charlotte, N. C.

Drs. Wood and Tyler, of Richmond, Va., announce the removal of their office to the new Professional building, corner Franklin and Fifth streets, Richmond, Va. Practice limited, oral surgery, extracting, dental X-ray.

Governor Stuart, of Virginia, has appointed Dr. Edward McGuire as the Richmond city member of the State Board of Health, to succeed Dr. Stuart McGuire, who surrendered the office by entering the reserve officers' medical corps.

More N. C. Doctors Wanted for the Army.—It is understood that the States quota of medical volunteers is 295 men, and up to this date only 165 have enlisted. It has been predicted, and it is hoped that more medical men will enlist from this state than its quota.

Dr. Stuart McGuire, of Richmond, Va., will go to France soon with his unit. He depreciates the report that he will remain in Richmond for the purpose of organizing other units for hospital work in France. Dr. McGuire, states that he will leave with the Medical College of Virginia hospital unit when it is ordered for duty in Europe. These orders are now awaited with keen anticipation by the members of the unit. Dr. McGuire is to have supreme charge of the unit and will be at its head when it leaves for foreign fields.

The Medical College of the state of South Carolina opened on the 28th of September. The opening addresses were made by Mr. Paul M. Rea, Dr. Charles W. Kollock and Dr. W. H. Zeigler.

Notwithstanding the war, the college has the largest freshman class this year that it has had in several years.

Major B. W. Brown, United States public health service ,has been elected assistant city health officer of Charlotte, in accordance with a request of the government. This circumstance was brought about on account of the proximity of the United States army camp, which is located in the edge of the city, and because it is very necessary for the health authorities of the city to co-operate every day with the army health officials.

The following prominent surgeons of North Carolina have been requested to report for duty at once by the War Department:

To Fort Ethan Allen, Vt., for duty, Capt. W. Allan, Charlotte.

To Macon, Ga., for duty, Lieut. A. S. Pendleton, Raleigh.

To Newport News, Va., and report in person to the commanding officer, port of embarkation, for duty, Capt. James E. Stokes, Salisbury.

The Physicians and Surgeons of S. C.—The medical section of the state committee of the Council of National Defense was organized in Charleston, September 27. Robert S. Cathcart, M. D., of Charleston, is the chairman and Charles W. Kollock, M. D., of Charleston, the secretary and treasurer.

Other members of the committee are: Drs. Edward Rutledge, Robert Wilson, Jr., and Lane Mullally, of Charleston; LeGrand Guerry, Columbia; Edgar A. Hines, Seneca; Curran B. Earle, Greenville; W. W. Fennell, Rock Hill; J. La-Bruce Ward, Columbia; S. C. Baker, Sumter; F. H. McLeod, Florence; J. A. Mood, Sumter; J. Heyward Gibbes, A. Earl Boozer, Francis Asbury Caword and James A. Hayne, Columbia, and A. N. Stark, colonel, medical corps, United States army.

It was announced that of South Carolina's quota of 195 doctors for the medical reserve corps of the army 134 have accepted service, leaving places for sixty-one. Doctors desiring to serve the country in the medical corps are invited to communicate with the surgeon general of the army, Washington.

Dr. H. G. Leigh, a very prominent physician of Petersburg, Va., died September 23, 1917, with a disease of the heart. Dr. Leigh stood high in his profession, was a leading member of the Petersburg medical faculty and of the State Medical Society, and enjoyed a large practice. He was about 50 years old. He had lived in

Petersburg practically all of his life. His medical studies were pursued at the University of Virginia, the College of Physicians and Surgeons, Philadelphia, and Bellevue Hospital Medical College, New York. He was for many years surgeon for the Atlantic oCast Line Railroad Company.

Dr. George W. Pressly, of Charlotte, N. C., has returned to Charlotte from Fort Sam Houston, San Antonio, Texas, where he has been surgeon for the last six or eight weeks.

He was subsequently sent from Fort Sam Houston to Leon Springs to look after the ninth and tenth battalions, signal corps.

The work there proved too much for the doctor and he was transferred back to Fort Sam Houston, and examined with reference to seeing if he could return to Leon Springs to resume his work there. Physicians and surgeons after examining him, decided that he was not able to perform the duties that had been and would be assigned to him. Consequently he has returned to resume his surgical work here in th ecity of Charlotte.

Dr. C. C. Hudson, of Danville, Va., has been recently elected health officer of this city. Dr. W. K. Reid, who has been our health officer for a number of years, has resigned and will take up general practice. He has made a very fine officer. He retires for the purpose of devoting his entire time to the general practice of medicine. His resignation was received with great regret my his many friends in this city.

Dr. Hudson has been health officer of Danville, Va., for about five years and is known as one of the foremost authorities in this part of the country, on municipal health matters. For two years he was an associate of Dr. E. C. Levey, of Richmond, Va. Prior to the time that Dr. Hudson took up this special work exclusively, he spent five years in general practice. He is a graduate bacteriologist.

Southwestern Virginia Medical Society.—Dr. W. R. Cushing, of Dublin, was elected president of this society at the annual meeting held on June 28th in Pulaski, and other officers were elected as follows: Dr. Z. V. Sherrill, of Marion, and Dr. W. Preston, of Roanoke, vice-presidents; Dr. A. B. Greiner, of Rural Retreat, secretary-treasurer; Dr. S. S. Gale, Dr. E. T. Brady, of Roanoke, Dr. F. H. Smith, of Abingdon, executive committee. The next meeting will be held in December.

Scholarships of the Medical College of South Carolina.—Governor Manning, on the 20th of September announced the appointments for the beneficiary scholarships at the Medical College of South Carolina. The list follows:

School of Medicine—First Congressional District, Richard C. Causey, Pinopolis; Second District, E. H. Prescott, Edgefield; Third District, M. L. B. Hutchison, Anderson; Fourth District, W. M. Sheridan, Spartanburg; Fifth District, W. Frank Strait, Rock Hill; Sixth District, Douglas Jennings, Jr., Bennettsville; Seventh District, John LaBorde, Columbia.

Roanoke Academy of Medicine.—This Academy of Medicine met in Roanoke city, on October 1st, and discussed many things of local and general interest. Dr. Brunet, of the United States Navy, Dr. Rone, of Kings County Hospital, New York, and several Roanoke physicians attended the meeting.

Officers of this society were elected for the ensuing year as follows: President, Dr. Hugh H. Trout, succeeding Dr. R. W. Brown, former president; first vice-president, Dr. R. M. Wiley, of Salem; second vice-president, Dr. Garthright, of Vinton. Dr. E. P. Tompkins was re-elected secretary, and Dr. J. H. Bogle, treasurer. The latter gentleman succeeded Dr. George S. Hurt, who was recently commissioned surgeon in the United States Army.

The most important business matters that came up for discussion were relative to the entertainment of the Virginia State Medical Society, which will convene in that city, October 30th to November 2nd. Dr. E. T. Brady is chairman of the committee on entertainment. Virginia has one of the best State Medical Societies, that we know of, and it is always largely attended, especially when it meets in a convenient and attractive city like Roanoke.

Medical Officers, Base Hospital, Camp Greene, U. S. Army, Charlotte, N. C., October 10, 1917: (Rank, service, assignments of duty and state of original residence prior to entering the army).

Commanding Officer—Major Wm. L. Sheep, M. C. U. S. A. (N. C.)

Internal Medicine—Major F. W. Palfrey, M. R. C. (Mass.); Capt. Joseph H.

Way, M. R. C. (N. C.); Capt. J. K. Stockard, M. R. C. (N. C.); Lieut. Grover Wilkes, M. R. C. (N. C.); Lieut. Wm. J. McAnanly, M. R. C. (N. C.); Lieut. Harvey Robinson, M. R. C. (N. C.).

General Surgery—Capt. Lomax Gwathmey, M. R. C. (Va.); Lieut. Jonathan M. Wainright, M. R. C. (Penn.); Lieut. Wm. M. Scruggs, M. R. C. (N. C.); Lieut. Samuel H. Lyles, M. R. C. (N. C.); Lieut. A. T. Perkins (N. Y.)

Orthopaedics—Capt. Jas. T. Rugh, M. R. C., temporary duty only (Penn.).

Venereal Diseases, Skin and Genito-Urinary Surgery—Lieut. Walter A. Defoe, M. R. C. (Mich.); Lieut. Clyde F. Ross, M. R. C. (S. C.)

Laboratories and Infectious Diseases—Major Wm. J. McDonald, M. R. C. (Mass.); Lieut. Leonard Hart, M. R. C. (Miss.); Lieut. Joseph C. Placack, M. R. C. (Ohio).

Neurology, Psychiatry and Psychology—Lieut. Alfred P. Chronquest, M. R. C. (N. Y.).

Roentgenology—Capt. Harold E. Carney, M. R. C. (Mass.).

Surgery of the Head and Face: (Eye, Ear, Nose and Throat)—Capt. Geo. A. Renn, M. R. C. (Va.); Lieut. Michael Saliba, M. R. C. (N. C.); Lieut. C. W. Banner, M. R. C. (N. C.); Lieut. Thos. E. McConnell, M. R. C. (Penn.).

Neurology, Psychiatry and Psychology: (Temporary Assignment for Special Examination of Troops on Admission) —Lieut. Paul V. Anderson, M. R. C. (N. C. & Va.).

Tuberculosis; Special Examination of all troops on entry—Capt. Geza Kremer, M. R. C. (N. Y.); Lieut. H. Elwyn, M. R. C. (N. Y.); Lieut. J. W. McNall, M. R. C. (Penn.); Lieut. J. H. Haldeman, M. R. C. (Kas.); Lieut. W. H. Schroeder, M. R. C. (Mo.); Lieut. F. E. Spencer, M. R. C. (Mo.); Lieut. G. H. Jennings, M. R. C. (Conn.); Lieut. D. S. Calhoun, M. R. C. (La.).

Surgery of the Head (Teeth and Mouth)—Lieut. Rollo J. Pusey, D. R. C. (Va.); Lieut. Geo. T. Baskerville, D. R. C. (Va.); Lieut. Vincent E. D. Bragg, D. R. C. (Va.).

Supply Department—Lieut. Gustave tant General with his recommendations. Fontayne, Sanitary Corps, U. S. R. (D. C.).

The following officers have additional temporary assignments:

Adjutant—Capt. Geo. A. Renn, M. R. C. (Va.).

Mess Officer—Lieut. Wm. B. Wilson, Q. M. C. (N. Y.).

Recruiting Officer—Lieut. Sam'l H. Lyle, M. R. C. (N. C.).

Sanitary Officer—Major Wm. J. McDonald, M. R. C. (Mass.).

Medical Students and the Draft.—The following regulations governinb the discharge of hospital internes and medical students from draft under the selective draft law of May 18, 1917, have been made pr the President:

First. Hospital internes who are graduates of well recognized medical schools or medical students in their fourth, third, or second year in any well recognized medical school who have not been called by a local board may enlist in the Enlisted Reserve Corps provided for by section 55 of the national defense act under regulations to be issued by the Surgeon eGneral and if they are thereafter called by a local boad they may be discharged on proper claim presented on the ground that they are in the military service of the United States.

Second. A hospital interne who is a graduate of a well recognized medical school or a medical student in his fourth, third, or second year in any well recognized medical school, who has been called by a local board and physically examined and accepted, and by or in behalf of whom no claim for exemption or discharge is pending, and who has not been ordered to military duty, may apply to the Surgeon General of the Army to be ordered to report at once to a local board for military duty and thus be inducted into the military service of the United States, immediately thereupon to be discharged from the National Army for the purpose of enlisting in the Enlisted Reserve Corps of the Medical Department. With every such request must be inclosed a copy of the order of the local board calling him to report for physical examination (Form 103), affidavit evidence of the status of the applicant as a medical student or interne and an engagement to enlist in the Enlisted Reserve Corps of the Medical Department.

Upon receipt of such application with the named inclosures the Surgeon General will forward the case to the Adju- Thereupon the Adjutant General may issue an order to such interne or medical student to report to his local board for military duty on a specified date, in person or by mail or telegraph, as seems most desirable. This order may issue regardless of the person's order of liability for military service. From and after the

date so specified such person shall be in the military service of the United States. He shall not be sent by the local board to a mobilization camp, but shall remain awaiting the orders of the Adjutant General of the Army. The Adjutant General may forthwith issue an order discharging such person from the military service for the convenience of the Government.

Three official copies of the discharge order should be sent at once by the Adjutant General to the local board. Upon receipt of these orders the local board should enter the name of the man discharged on Form 164A and forward Form 164A, together with two of the certified copies of the order of discharge, to the mobilization camp to which it furnishes men. The authorities at the mobilization camp will make the necessary entries to complete Form 164A, and will thereupon give the local board credit on its net quota for one drafted man.

The Seventh District Medical Society.—This society met in Shelby, N. C., on October 8th and 9th, with the following officers in attendance: Dr. J. E. S. Davidson, Charlotte, N. C., Councillor; Dr. H. D. Stewart, Monroe, N. C., President; Dr. W. F. Mitchell, Shelby, N. C., Vice-president; Dr. S. R. Thompson, Charlotte, N. C., Secretary. The committee on arrangement was as follows: Dr. E. B. Lattimore, Dr. R. C. Ellis, Dr. T. G. Hamrick, Dr. B. H. Palmer, all of Shelby, N. C.

The following program was without any exception carried out:

Invocation—Rev. Lee McB. White, Shelby, N. C.

Address of Welcome—Hon. D. Z. Newton, Shelby, N. C.

Response to Address of Welcome—Dr. Oren Moore, Charlotte.

1. Neuraesthenia: Its Relation to Stomach Disorders—Dr. J. Q. Myers, Charlotte, N. C.

2. Army Methods in Sanitation—Maj. George E. Houch, U. S. A., Camp Greene.

3. Rheumatic Iritis—Lieut. C. A. Leigh, U. S. A., Camp Greene.

4. Anatomical Anomalies o fthe Kidney: Illustrated—Dr. R. L. Gibbon, Charlotte, N. C.

5. Abdominal Reflex Irritation—Dr. O. J. Houser, Charlotte.

6. Report of Secretaries of Each County of the District.

7. Report of an Unusual Case—Dr. R. Amfield, Marshville.

8. Cretinism—Dr. E. B. Lattimore, Shelby.

9. Prostatectomy: Pre and Post-Operative Treatment—Drs. A. J. Crowell and S. R. Thompson, Charlotte.

10. Infant Feeding Problems—Dr. J. E. Kerr, Lilesville.

11. Prevention and Treatment of Tetanus: Case Report—Dr. E. A. Houser, Fallston.

12. Iritis—Dr. J. G. Johnston, Charlotte.

13. Tuberculosis of the Eye and Ear—Dr. R. W. Petrie, Charlotte.

14. Significance of Pain in and Around Ear—Dr. J. P. Matheson, Charlotte, N. C.

15. Report of Some Obstetrical Cases—Dr. J. A. Patterson, Concord, N. C.

16. Frequency of Urination in Women—Dr. Robt. H. Lafferty, Charlotte.

18. Cutaneous Manifestation of Syphilis—Dr. J. E. S. Davidson, Charlotte.

19. Paragraphic Medical Briefs—Dr. H. D. Stewart, Monroe.

20. The Role of iPtuitary Extract in the Causation of Eclampsia—Dr. R. H. Rowe, Bessemer City.

Many of the addresses were very interesting and instructive. Major George E. Houch, made a splendid talk on the Army Methods in Sanitation. It was very complete and very valuable.

The following officers were elected for the coming year: Dr. W. F. Mitchell, Shelby, N. C., was elected president. The Vice-President is Dr. L. N. Glenn, of Gastonia, the Secretary is Dr. S. R. Thompson, Charlotte, N. C. The next meeting will be held in Gastonia, N. C., next October. The selection of Shelby for a meeting place, was a good one. The members of the medical profession there and the citizens were especially courteous and pleasant to the visiting doctors. The meeting place was ideal, and the hotel accommodations ample and good. A banquet was given in the main dining room of the Central Hotel, complimentary to the visiting physicians. Several prominent citizens of that city was also present.

BOOK NOTICES.

The Prescription, Therapeutically, Pharmaceutically, Grammatically and Historically Considered, by Otto A. Wall, Ph. G., M. D., Professor of Materia Medica, Pharmacognosy and Botany in the St. Louis College of Pharmacy;

Member of the Committee for Revision of the Pharmacopoeia of the United States, 1880-1890 and 1890-1900; Second Vice-President of the Convention for the Revision of the United States Pharmacopoeia from 1900-1910; Presiding Officer of the United States Pharmacopoeia Convention of 1910; One of the Authors of the "Companion to the United States Pharmacopoeia" Author of "Handbook of Pharmacognosy," "Lesson in Latin," etc. Fourth and Revised Edition, C. V. Mosby, 1917, St. Louis, Mo. Price, $2.50.

This book has been out of print for some years, but the demand for it continued, so that it was thought proper to reissue it. For this purpose parts of it have been rewritten and amplified, and it is now presented in better shape, with larger type and larger pages, so that it is a far more attractive book than the three preceding editions.

Students of medicine and of pharmacy who desire to acquire a complete knowledge of what a prescription was, is, and should be, will find all the necessary information on this subject in these pages. Practitioners of medicine and pharmacists will find it of great interest and they will find many suggestions that will be of use to them. Of especial value and interest is the section on the use of the metric system in prescribing, and easy methods of acquiring the ability to write correct prescriptions of this kind are thoroughly explained.

This is a good book and will interest anyone who wishes to be more proficient in Materia Medica. Dr. Otto A. Wall, writes well and his style is sufficiently attractive to make what is usually believed as dry reading, easy reading, without taxing the reader very much. It contains 274 pages, printed on god substantial paper, and has an attractive binding. It has a few illustrations, not many, but all that

Diseases of the Skin, by Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine; Former Chairman of the Dermatological Section of the American Medical Association; Member American Dermatological Association; Assistant Surgeon, United States Navy, Retired; Dermatologist to the Christian Church Hospital. With Eight Hundred and Thirty-Three Illustrations, and Eight Colored Plates. Second Edition, Revised and Enlarged. 1917, C. V. Mosby, St. Louis, Mo. Price $6.50.

Among new topics considered are Gangrenous Balanitis, Atrophy of the Mucous Membranes of the Tongue and Mouth, and Atrophy of the Fatty Layer of the Skin. The article on Perleche has been rewritten, and that portion of the one on pediculosis which deals with treatment, considerably amplified.

According to the author, a demand for a second edition of this book has been made.

140 new illustrations have been added to those of the first edition, this makes a total number of illustrations 833, besides 8 colored plates. These illustrations are beautiful and appropriate in every way. The artist has done his work well, also the publisher's. The volume is a large handsome one of 1,021 pages. Dr. Richard L. Sutton, is too well and favorably known all over this country, for the reviewer to say anything about his writings, more than to announce the fact that he has gotten out this wonderful work on Skin Diseases. His reputation is a sufficient guarantee that the book is thorough and complete and up-to-date.

Progressive Medicine, a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobart Amory Hare, M. D. Awarded Grang Prize, Paris Exposition, 1900. Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by Leighton F. Appleman, M. D. Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglas Memorial Hospital and to the Burd School; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Volume III, September, 1917. Diseases of the Thorax and its Viscera, Including the Heart, Lungs and Blood-vessels—Dermatology and Syphilis, Obstetrics, Diseases of the Nervous System. Lea & Febiger, Philadelphia and New York. $6.00 per Year.

Medical War Manual No. 1, Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. Sanitation for Medical Officers, by Ed-

ward B. Vedder, M. D., Lieut.-Col., Medical Corps, U. S. A. Illustrated. Lea & Febiger, Philadelphia and New York, $1.50.

This work was created to supply in a compact form that can be conveniently carried in the pocket of a uniform, such data as may be useful to medical officers as a guide for sanitary w rk. As far as possible the information has been made official by the inclusion of the sanitary orders and circulars bearing on the topics discussed. All notes have been made as brief and concise as possible. An endeavor has been made in writing the section on transmissible diseases to present the most recent knowledge concerning the etiology and transmission of the disease in question, together with all information necessary upon which to base a sanitary campaign for its control.

This is certainly a complete little book of 206 reading pages, with a great many blank leaves for notes. It has a few illustrations, all that are necessary for a book of this kind. It also has several valuable tables.

It would be well enough for every physician throughout the country, whether they intend to go in the army or not, to read this little book carefully.

A Text-book of Anatomy for Nurses, by William Gay Christian, M. D., Professor of Anatomy, Medical College of Virginia, Richmond, With Thirty-four Original Illustrations, Five of Which Are in Colors. 1917, C. V. Mosby Company, St. Louis, Mo.

This book was written because the author believed that the existing text-books on the subject were unsatisfactory. He believes that pupil nurses should be shown the various tissues and organs of the body, and that this work should be done before they entered the hospitals for their professional training. He says that this can be readily accomplished if Medical Colleges will offer a brieg practical course during vacation. He further says, that such a course should occupy not more than three or four weeks, and that two or three hours a day in laboratory instructions should be expected. The author states in his preface that possibly he has written a too elaborate book for practical use, but the reviewer believes that the author of the book has no occasion to apologize for this, because the book is not too elaborate nor too brief. He discusses the points brought out in the book intelligently, and with care. The publishers and the author expect this book to be used in training schools for nurses, as a text-book. For this purpose it is admirably suited.

Miscellaneous.

Chronic Cardiac Disease.

The patient with organic heart disease needs constant attention to his digestion and nutrition. A little falling off in the general vitality and the compensatory status of the heart may be lost forever. At the first sign of nutritional decline, therefore, Gray's Glycerine Tonic Comp. should be given. This dependable tonic braces a wavering organism by reinforcing weakened functions. Thus it not only directly contributes to cardiac power, but what is vastly more important, materially reduces the stress under which a feeble heart constantly has to labor. In other words, while increasing the carrying power of the heart, it also decreases the burden.

Cod Liver Oil in the Debilitated.

The reason why ordinary cod liver oil is not adapted to most debilitated cases is to be found in the fact that the aimpaired gastric function quickly gives way under the extra burden of digesting the fatty substance contained in the oil.

This objection of the plain oil is obviated if a palatable preparation, such as Cord. Ext. Ol. Morrhuae Comp. (Hagee), is employed.

Not only is Cord. Ext. Ol. Morrhuae Comp. (Hagee) palatable and tolerated for indefinite periods, but further still, it offers to the debilitated patient the every essential property of the plain oil. It is everything that plain cod liver oil is except disagreeable.

Tonics Preferable to Stimulants.

In selecting a tonic it is highly desirable not to mistake stimulation for tonic action. Stimulation means unduly exciting the higher nerve centers, suddenly and often excessively elevating the blood pressure, and providing a quick but evanescent effect which rapidly passes away and is many times more harmful than beneficial. Tonic action means the gradual restoration of functional efficiency—"helping the body to help itself." Thus, Gray's Glycerine Tonic Comp. is a true tonic, with all the advantages and none of the drawbacks of a stimulant. To state it tersely, "Gray's" is an aid and a support to body functions—a genuine prop—not merely a spur or lash.

The Philosophy of the Action of Sanmetto in Gonorrhea may be explained in this way: Sanmetto has not direct germicidal action in the treatment of membraneous conditions due to the invasion of the gonococcus. It should be borne in mind that sanmetto does not directly destroy gonococci. Whatever may be its direct action upon these germs, it is certain that it does not have any such directly germicidal influence. What it probably does is to set up in the mucous membrane a reaction to the inflammation, or a nutritive toning up of the parts, which brings to the parts a sufficient reinforcement of leucocytes to overwhelm the germs—the gonococci. This view of the action of sanmetto explains the apparent aggravation which sometimes is set up in the treatment of chronic inflammation of the bladder and urethra, and a consequent sloughing off of shreds and purulent matter, causing the patient to think the sanmetto has made his case worse, but which really is but the smoke of the battle in which sanmetto is to be the victor and the gonococci the vanquished.

The Catheter.

The Catheter unskillfully or carelessly employed is a dangerous instrument, and before its use it is better where there is retention of urine to resort to all palliative measures first, as hot sitz baths, suppositories of belladonna and opium, hot rectal injections and colonic flushings, and to the administration of sanmetto in teasponful doses every hour for first three or four hours and then every two hours until reasonable time for relief. Never withdraw the entire amount of urine at once, as it might be followed by hemorrhage from the bladder or kidneys or a complete suppression of urine ending fatally. Always follow urethral or bladder instrumentation with irrigation or injections of the milder silver salts, and the administration of sanmetto to soothe and relieve the irritation or inflammation of the urinary canal.

Urinary Antisepsis.

In the opinion of many practitioners sanmetto offers the nearest approach to the ideal inhibitor to bacterial growth. It is not only non-toxic and non-irritating but rather soothing to the urinary tract, while not strongly antiseptic yet sufficiently bacteriostatic for common routine cases. It is largely excreted by the kidneys. In prostatic cases it tends to relieve incontinence, clears up the urine, and is useful as soother before and following instrumentation. It is of positive value in urethritis and cystic conditions. It is never accompanied by the untoward conditions so often following the use of more powerful germicidal and bactericidal antiseptics. Sanmetto is safe.

Nature's Combinations vs. Synthetics.

Drugs derived from plants as nearly in their natural combinations as possible meet nutritional conditions of the germ-plasm, which is not the case with synthetics. It would be strange indeed if such were not the case, as the latter act upon the system as foreign bodies, depressing and paralyzing the functions or setting up irritation until thrown off or eliminated if absorbed. They may have their uses, but are not tonic to neuron-tissue nor molecular upbuilders, as are natural plant drugs. Sanmetto is one of the products from plant elements wrought in the wonderful laboratory of Nature, which are assimilable and nourish while they heal, as opposed to the artificial elements wrought in the chemical factories, whose actions upon the human economy are those of foreign bodies, irritating and depressing until thrown off by the conservative and defensive forces of the body.

At the Front.

A great many physicians who have been in private practice are now or shortly will be in the service of the United States Government. Practically all of them are familiar with Antiphlogistine, and a great number will continue to employ this preparation in their field work, as it is supplied by the Government on special requisition.

Since the beginning of the war tens of thousands of packages of Antiphlogistine have been used in the hospitals of France, at base hospitals in England, and in garrison and camp service in aCnada, Australia and New Zealand.

The medical men who see service in France should remember that Antiphlogistine obtained from The Denver Chemical Mfg. Co., No. 116 Rue de la Convention, Paris, is composed of the same C. P. ingredients and compounded according to the same formula as the American product.

Primary Wound Suture—Watson, who has had a broad experience in France as a British army surgeon, observes that

within the last six months a far wider field of wound suture has been opened up by the method which he describes, nad which, in his opinion, may considerably modify future views on the treatment of wounds. This method includes the use of Morison's bismuth and iodoform paste—"B. I. P."—which consists of bismuth subnitrate, one part by weight; iodoform, two parts, and liquid paraffin sufficient to make a paste. Watson believes that if the technique advised by Morison is carefully followed, the Carrel method of wound flushing can be dispensed with in many cases. He states that the method seems to be well suited to recent wounds, though in these the amount of paste used should be limited owing to the risk of iodoform poisoning. Morison's initial work was carried out on wounds that reached him seven to fourteen days after infliction. Briefly, the method is to open up the wound thoroughly and remove with the knife all damaged tissues; the entire wound surface is dried with spirit and thoroughly smeared with paste; the wound is then filled with paste and closed by suture without drainage. Very severe wounds should not, at any rate in the early stages, undergo the extensive operative treatment required by this method. Watson thinks that the field for primary suture can be considerably extended with safety by using "B. I. P." whereby much economy will result, not only in time taken up by surgeons and nurses in dressings, but also in the length of time required to effect a cure. Usually there is a moderate though transitory initial rise of temperature, and for the first few days there may be some redness of the skin edges, but pain disappears as if by magic almost at once. There is no need to dress the wound so long as the patient is comfortable. Wounds, though discharging serum freely through the sutures, may be left untouched for weeks at a time, except as regards the outer dressings, without delaying progress. When the wounds ar sdressed for the first time the dressings slip off without pain.—St. Bartholomew's Hospital Journal.

Simulation of Skin Disease by Soldiers.—At a meeting of the Riunioni Medico-militari Castrensi R. Rivalta read a communication giving particulars of 100 cases of what he calls "cutaneous pantomimiry" which had come under his notice from November, 1915, to October, 1916. In 43 cases the artificial lesions were eschars and sores, in 20 eczematoid dermatoses, in 20 suppurating and phlegmonous, in 9 bullous dermatitis, in 8 hard traumatic oedema. The number would have been still greater had the cases in which there was a suspicion of simulation which could not be verified been included. To these must be added some which were not recognized. In all the cases reported the lesions were produced by the external application of a chemical irritant, or less frequently heat, or by direct injury. The seat of election of the eschars and sores, which constituted about one-half of the total, was the lower limbs, especially the feet. Eczematoid dermatitis was most often seen on exposed surfaces, such as the cheeks and the concha of the ear; the lesions varied from scarcely perceptible abortive forms to the most acute processes with great oedema of the whole face, closing the eyes and giving the patient an appearance "at once monstrous and comic." The phlegmonous lesions were situated almost exclusively on the lower limbs, most frequently the left; repeated applications of the irritant generally caused multiple foci of inflammation in different stages on the same limb, the process going beyond the intention of the malingerer, who was frightened at the self-inflicted damage to his tissues.

The bullous lesions were situated on the feet, and were always said to have been caused by scalding with boiling water; it was difficult to determine whether they were accidental or artificial. The lesions produced by boiling liquids are generally multiple phlyctenulae or bullae with a thin pellicle; they contain a fluid serous transudate, and have polycyclic outlines. On the other hand, those caused by blistering fluids are mostly bullae few in number with a thick pellicle adhering to the contents which are almost gelatinous; their outline is generally an unbroken curve of large radius. The hard traumatic oedema is most frequently seen on the back of the hands especially the left; there were never any signs of contusion (ecchymosis, etc.), and the lesions had sharp outlines, especially at the roots of the fingers; they were of hard elastic consistence and not very painful. They were produced by repeated injuries mitigated by the interposition of pieces of cloth; sometimes they were caused by irritant liquids. Edema of the feet accompanying the first stage of frost-bite was doubtless in many cases due to constriction by tight drawersfi gar-

ters, and puttees, but it was impossible to determine whether such constriction was deliberately caused in order to produce swelling of the limb or was brought about accidentally by wetness of the garments. The diagnosis of the artificial character of a skin affection generally amounts only to medical conviction, not to legal proof. In five cases, however, the author identified the agents employed; in two cases the discovery was confirmed by the confession of the simulators that they had used pieces of the root of a sort of leek common in Sicily.—Brit. Med. Jour.

Food Poisoning from Canned Asparagus.—Baginsky relates the cases of children who three hours after eating preserved asparagus were seized with high fever, intense malaise, vomiting, somnolence, and alarming cardiac weakness. The stools contained blood. The disease, whic hended in recovery, was found to have been due to Gaertner's bacillus.—Muenchener medizinischer Wochenschrift.

Surgery and Chronic Influenza.—Armbruster understands by chronic influenza a condition with some infiltration of the lungs, chiefly posterior. From these foci streptococci have been known to set up felons and erysipelas, inflammatory flat foot, pharyngitis, abscesses in lymphnodes. If these subjects are operated on the scars often break open, or there is delay in healing. Lumbar neuralgia following chronic influenza has been known to cause cecal irritation and even imagination.—Zentralblatt fur Chirurgie.

Generalized Herpes Zoster.—Lum Busch in an autopsy of a patient with this diagnosis found gangrenous zoster in the region of the third intercostal nerve and a generalized eruption over the entire surface; broncho-pneumonia (the cause of death); an inflammatory process in the posterior spinal roots, intervertebral ganglia and even the cord.—Muenchener Medizinische Wochenschrift.

Reactivation of the Wassermann Reaction by Injections of Mercury and Sulphur.—Bergeron and Jouffray (Presse Medicale) point out that, for 'reactivating" a negative or doubtful Wassermann reaction in the presence of syphilis, the antisyphilis measures applied must be neither too powerful nor too weak. Injections of mercury constitute the best procedure for this purpose. They employ intramuscular injections of colloidal mercury, in conjunction with sulphur—the latter used because of its tendency, noticed at sulphur springs, to cause reactivation of syphilitic lesions where these have become resistant to mercury, and in long standing, apparently cured, cases of syphilis. Thus, in previously untreated cases of suspected syphilis with negative or weak Wassermann reaction, 0.25 milligram of sulphur and one milligram of colloidal mercury, combined in one c. c. of fluid, are injected intramuscularly, and the injection repeated three days later. After this three double doses of each agent are injected, again at three day intervals, and two weeks later, a Wassermann test i smade. In case reactivation has not yet taken place, subsequent tests are made two weeks and three weeks after the first, respectively. If these are still negative, syphilis presumably does not exist in the subject under examination. In five cases with manifestly syphilitic chancre, secondary eruptions, tibial gummata, iritis, and even general paralysis, but with weakly positive Wassermann, the reactivation treatment resulted uniformly in a strongly positive Wassermann. The same result was noted in fifteen feebly positive cases of liver enlargement, nephritis, hemiplegia, nontuberculous lung lesions, cardiac or vascular affections, or chronic rheumatism—thus all shown to have been syphilitic in origin—and in sixteen additional cases with a negative or merely suspicious Wassermann, sometimes both in the blood and cerebrospinal fluid, including instances of bronchiectasis, uterine neoplasm, inveterate headache, rhinitis, glaucoma, etc. If there is delay in the reactivation, the treatment should not be continued beyond the limits already indicated, lest it be sufficient in itself to cause abolition of an otherwise positive Wasseight hours after the first uranalysis both reactions were positive. The reactions were not negative until the fourth day. The affection seems to occur more often in girls than in boys, and usually between the ages of two and twelve. It may occur in more than one child of the same parents. The occurrence of migraine in other members of the family has been noted. It is possible that the mental symptoms—drowsiness and lassitude—mentioned in this case may after puberty become transformed into migrainous attacks. Pyrexia in these cases is not common, the temperature rarely exceeding 100 deg. F.

which are absorbed into the maternal bloodstream and materially affect the vitality of the fetus in utero. This gives the child a material handicap at birth and often seems to underlie the subsequent development of marasmus. It also influences the condition of the mammary glands and is often the cause of deficiency in the quality or quantity of the milk. Finally the added strain which the absorption of these toxins throws upon the maternal excretory apparatus is often enough to turn the tide against the woman in the toxemias of pregnancy and to precipitate eclampsia and other complications. The validity of these suggestions is shown by the instances of the birth of healthy children by mothers who had previously had weak and marasmic ones or miscarriages or premature births, normal births having resulted after the oral condition had been cured.

A Case of Cyclic Vomiting with Acetonemia.—Weber, in The British Journal of Children's Diseases, cites the case of a girl, aged seven years, who is said to have vomited at birth, and has had recurring attacks of vomiting since, lasting about three or four days, with intervals averaging five weeks between the attacks. The other members of the family—three sisters and four brothers—are not affected. The urine reduced Fehling's solution very slightly, but gave a positive reaction for acetone and diacetic acid. She was treated with sodium bicarbonate, which soon rendered the urine alkaline, but the reaction for diacetic acid was not negative until the fifth day. A second attack occurred about three weeks after she had been discharged from the hospital. This attack was preceded by a feeling of lassitude and sleepiness lasting one day. Six hours after the vomiting commenced the reactions for acetone and diacetic acid were negative. About

of the vaginal plug for the control of ante partum hemorrhage. The failurse which its use has met in the hands of many others are due to the improper method of application. The plug should be inserted as follows: The left hand should be passed into the vagina with the palm facing the sacrum and the tips of the fingers behind the cervix. Pieces of cotton wool the size of the thumb knuckle wrung out of lysol solution, should be inserted into the cervix with the right hand while the fingers of the left are squeezing the pledgets into a solid mass and making room for more. This pro-

Heart Failure During Tonsillectomy.—Mollison, in The British Journal of Children's Diseases, mentions the very interesting case of a boy, six years of age, in whom shock developed during an operation for the removal of tonsils and adenoids under chloroform ether anethesia. The body became flaccid, respiration had ceased, the pupil was dilated, and the corneal reflex absent. Lowering of the head, pulling the tongue forward, artificial respiration according to the method of Sylvester, and the administration of stimulants, including pituitrin injected directly into the heart, did not improve his condition. The stethoscope revealed absence of heart sounds. An incision four inches long was made in the abdomen, extending from the ensiform to just above the umbilicus, and through this incision the heart was massaged. Almost one c. c. of pituitrin was injected directly into the heart through this incision. It is estimated that the period of cessation of heart beats was from thirteen to twenty-four minutes. The boy was given saline infusions and the foot of the bed was raised. About an hour later he became restless and the intestines escaped from the wound. He was operated on again under light ether anesthesia and the intestines replaced. He was unconscious for seven days, had rigidity of the limbs for ten days, incontinence of urine for fifteen days, of feces for twelve days, and at one time became violent and tore the bedclothes. These symptoms were probably due to severe cerebral irritation, the brain being damaged during the cessation of the circulation. He eventually made a complete recovery. Thirteen other successful cases of a similar kind have bee reported.

The Vaginal Plug.—Tweedy, in The London Lancet, says that the proper use sermann. In a few cases the reactivation procedure seemed to fail, doubtless either because of actual absence of syphilis, preceding cure of the disease, or unexpected therapeutic activity of the agents given.

Influence of Maternal Oral Sepsis on the Fetus and Marasmic Children.— E. Spencer Pierrepont, in The London Lancet, suggests, as the result of years of observation, that the presence of oral sepsis in the mother exerts a considerable influence upon the welfare of the child and even leads in a number of cases to miscarriage and prematurity. He contends that the oral sepsis furnishes toxins

cess should be continued until the whole vagina is filled with a solid mass of the

cotton. A T binder should then be applied and a firm abdominal binder put on and wastened tightly from above downward. Such a plug will at once arrest the hemorrhage, which it accomplishes by compressing the uterine vessels between its mass and the uterus. The plug has the disadvantages of not being easy to apply and of causing some pain and shock and often some superficial lacerations of the vaginal mucosa.

Diagnostic and Therapeutic Lumbar Puncture in Spinal Injuries.—Neuhof (Archives of Diagnosis) says that in the Bellevue Hospital lumbar puncture has proved of signal aid in cases of suspected or evident spinal injury and is now performed as a routine measure. The finding of a large quantity of blood and evidence, on repeated puncture, of continuation of the bleeding constitutes one of the exceedingly few indications for operation in recent spinal traumatism. In some instances, the blood found in the spinal canal afforded the only evidence that vaguely suspected spinal injuries were actually vertebral traumas with compression of the cord. The finding of blood is of unusually great value in the presence of acute or subacute alcoholism, of coma or mental confusion, or of hysteria. In cases of skull injury blood in the spinal canal is of less value in the diagnosis of associated spinal injury, unless large amounts of fresh blood are noted. To eliminate the needle as the cause of bleeding the spinal fluid should always be collected in two or three test tubes. That lumbar puncture may obviate operative intervention in suspected cord injury was illustrated in the case of a woman in whom, after a street car accident, complete motor and sensory paralysis in the legs developed progressively. Puncture revealing clear fluid, operation was withheld, and soon after the reflexes began to reappear. As a therapeutic measure, lumbar puncture is of value to relieve compression or irritation of the cord by fresh blood, and to minimize the afterreffects.

Neurasthenia in Soldiers of Home Forces.—Burton Fanning, in The London Lancet, draws attention to the predominance of neurasthenia among newly recruited soldiers reporting sick, using the term in its widest sense—that of a a disorder of the nervous system without apparent organic basis. Five hundred and nine men out of 1,600 reported sick were suffering from this condition in one or other of its varied forms. A large proportion of the neurasthenics realized that they were of a nervous temperament and that this was the cause of their disability. There were very few exceptions to the fact that the men of this class were certain of their inability to stand military service and resented being called to the colors. Some of the men were of average physical development, but the majority were of notably poor physique, not a few were actual degenerates, and very few were of a physical development beyond the average. An important diagnostic point is that the neurasthenic man never limits his complaints to any one organ or any single organic disease. There are several almost universal symptoms among these cases such as, prostration, general weakness, sense of exhaustion, and sudden collapse. The men all lack energy, are unable to concentrate or interest themselves, and are mentally preoccupied. Other symptoms common to almost all are tremors of various types, such as slight quivering of the upper lip in speaking, rapid vibratory movements of the upper evelids when closed, or fine tremors of the extended fingers. These signs at once put the examiner on his guard and suggest neurasthenia. Cold extremities, hot and cold flashes, feeling of something creeping beneath the skin, giddiness, and profuse sweating, especially the condition of moist palms, are almost characteristic among the vasomotor phenomena. A flush across the forehead is very common, loss of weight, exaggerated knee jerks and a dry, sanded tongue are also all very common. The patients' chief complaints, in the order of their frequency, are rheumatism or rheumatic pains variously located, not necessarily in the joints; symptoms called neuritis; backache; gastritis; cardiac pains, dyspnear; pulmonary trouble, often regarded tuberculosis; disturbances of micturition; distressing throat symptoms; and much less commonly symptoms referred to the sexual organs. In all these conditions the characteristic evidences of the real disease are wanting, and in the cases of disordered action of the heart there is no evidence of any true affection of this organ and none to implicate the thyroid gland. Although proper treatment may serve to relieve the patient of all or most of hi ssymptoms, these men never can be made fit for military duties, and it is best to have them undertake some useful form of occupation at home.

Nature of Acne Roscacea.—Arullani looks upon this as a chronic constitutional affection occurring in subjects with flabby and readily dilatable heart, arterial hypotension (even in youth), cold extremities, hyperidrosis, palpitations, and digestive disturbances, the latter also acting as causes of exacerbations. Much of the treatment which is in use by the general run of practitioners is, he thinks, irrational. They keynote should be increase of vascular tension and improvement of blood count and hemoglobin.—La Presse Medicale.

Keeping Down Flies.—C. G. Moor (Proc. Roy. Soc. of Med.) says that the use of arsenic, formalin, and other methods, he states that a sticky mixture can be made on the spot, which is quite as effective as anything that can be bought and very much cheaper. It can be applied to paper, string, old tent-ropes, or wires. The sticky mixture (or "fly-glue") is prepared by painting a hot mixture of two parts by weight of powdered resin to one part by weight of castor oil on to any suitable material. It requires a little practice to make the mixture, which is prepared by heating the ingredients in an old saucepan or dekchi, and stirring all the time with a stick. This mixture is very stiff and tenacious when cold, but when hot it is quite fluid, like ordinary oil-paint. As it is difficult to carry about papers coated with the fly-glue, it is best to apply the glue to wires, for in most camps there is a quantity of wire to be found which comes on the hay-bales. This can be straightened out and cut into 2-foot lengths. An inch at one end is bent so as to make it possible to hang the wires on nails. The mixture can be kept in tins for weeks or months, but it should not be applied to the wires or paper until they are required for use. The wires are painted with the glue, and then placed in a bucket made out of an old cresol-drum; 500 wires can be easily carried by a man. They are hung up on nails in latrines, kitchens, larders, and food stores; in a marquee they can be hung on a string stretched between the two poles at a distance of 9 feet above the ground. As soon as they are full of flies, or in any case not later than after two days, they are replaced by fresh wires, and the old ones are placed in bundles in a low furnace and burned off. They are then ready to be glued again, and can be used all the season, and then put in a dry place for the following year. In a bell-tent they may be hung with the bent end hooked in each of the three small ventilators; in this position the sticky portion does not touch the tent, nor the poles, nor the men's heads or clothes. There is nothing in the mixture which is attractive to flies, but they like to settle on anything which is dark and narrow, and hanging down.

Isolated Nasal Diphtheria.—Rolleston (British Journal of Children's Diseases) gives the percentage of isolated cases of nasal diphtheria, originating in and confined to the nose, as .5 per cent. It is most frequently seen in young children and is more prevalent in the cold months of the year. Congenital syphilis is a predisposing cause. The great majority of the cases run a mild course, but rare examples of toxemic diphtheria confined to the nose do occur. The mild course has been proved to be due to autoimmunization. Chronicity is a characteristic feature of isolated nasal diphtheria, the presence of the bacilli being explained on anatomical grounds. Sequelae are occasionally seen, but ar erare. Local treatment should be avoided, but antitoxin is indicated. The term 'fibrinous rhinitis" should be reserved for comparatively rare cases in which this form of rhinitis is due to other causes than the diphtheria bacillus. The practical significance of isolated nasal diphtheria consists in its epidemiological importance.

Orthostatic Symptoms in Gastric Pathology.—Leven (Paris Medical) lays stress, with X-ray studies as basis, on certain orthostatic symptoms noticed in men in active military service and apparently always related to gastric dilatation pletely and the condition is often not recognized as having existed during life. The condition, besides tending to sudden death and lowering the child's resistance to acute infections, also predisposes to rheumatism and tuberculosis.

Some Varieties of Congenital Heart Disease.—Findlay and Martin describe two cases of congenital heart disease. In a case of congenital stenosis of the pulmonary tract with atresia of the orifice —septal defects and patent ductus arteriosus, a child of 3 months, the mother noted that when it was 2 weeks old, its body was of a blush tint. Since that age it had a cough and was subject to "peculiar turns," in which the cyanosis became very marked and the breathing stopped. Examination of the heart did not disclose any enlargement of the pre-

cordial dullness and the heart sounds were pure. The pulse was 140-150 a minute. Autopsy revealed a congenital stenosis of the pulmonary tract with atresia of the orifice, incomplete interventricular septum, patent ductus arteriosus and patent foramen ovale. The primary factor in this case is a defective development of the pulmonary tract. The septal defects are inevitable consequences of the pulmonary atresia. The fact that the pulmonary orifice was completely occluded accounts for the absence of any murmur indicative of pulmonary stenosis.

The second case was one of congenital stenosis of pulmonary tract, with septal defects. This child was two months old. It was under observation in the hospital on account of a stationary weight. It was cynaosed and presented great distension of the veins over the chest and abdomen. The pulse was small and could not be satisfactorily counted. The precordal dulness was slightly enlarged to the right and all over the heart could be heard a blowing systolic murmur, with its seat of maximum intensity at the base. The second sound at both pulmonary and aortic areas was loud and sharp. While under observation the intensity of the cyanosis varied and at times the murmur could not be heard. Post mortem revealed an example of the commonest type of congenital heart disease, i. e., the combination of pulmonary stenosis with patecy of the inter-ventricular and inter-auricular septa.—Glasgow Med. Jour.

Cardiac Neurosis—Functional Disorders of the Heart.—Cornwall observes that certain disorders of the heart which are apparently due to disturbing impulses and gastroptosis. These symptoms include tachycardia, diminution of blood pressure, hyperesthesia of the solar plexus, albuminuria, facial pallor and lassitude, mydriasis, etc., all of which disappear when the subject lies down or is provided with a supporting belt so designed and placed as to hold up the dependent portion of the stomach. Prevel is quoted in connection with this on the relationship of a prominence of the abdomen below the umbilicus with an unusually marked abdominocardiac reflex. As a matter of fact, this abdominal conformation is regularly met with in cases of visceroptosis. The symptoms mentioned appear due simply to the irritation of the solar plexus which results from the dragging of the dilated and ptotic stomach. The mere presence of such orthostatic symptoms warrants in some degree an a priori diagnosis of gastric ptosis and dilatation. The frequency of unexplained and untreated tachycardia in the army is accounted for in this way, as is also a special variety of albuminuria. Relief following appliaction of the appropriate remedial measure is often little short of disconcerting in its promptness and permanence.

Status Lymphaticus.—Cameron, in The British Medical Journal, makes the suggestion, supporlted by case citations, that status lymphaticus is a fairly common occurrence and is not a congenital disorder, but one acquired as the result of faulty nutrition. Cameron believes that the lymphatic enlargement which is so typical of the disease is the result of hypertrophy from a chonic form of catarrh of the corresponding mucous membranes. The condition should be called, "status catarrhalis." The catarrhal condition results from chronic infection of the mucous membranes as the result in turn of the faulty nutrition of the children. This faulty nutrition is the result of the use of an excess of carbohydrate in the dietary, usually in the form of sugar and white bread. The catarrhal state is associated with a marked accumulation of water in the tissues which gives these children the false appearance of marked robustness. In patients dying suddenly or after short periods of illness, the hypertrophic condition of the lymphatic tissues and the waterlogged condition of the other tissues as well as the catarrhal state of the mucosae are evident. In those dying after more prolonged diseases all of these signs disappear more or less comwhich come to it throug its nervous connections, and for which no basis in organic heart changes can be found, are classed, pending increase in pathological knowledge, as cardiac neuroses. The disturbing impulses may come from anatomical derangements which interfere with the free action of the heart, viz., flat chest, curvature of the spine, pleuritic adhesions, obesity, tight lacing, abdominal flatus, and an unusually long thorax or a depressed diaphragh (due to enteroptosis) which produces cardioptosis. They may come as a result of visceral reflexes, viz., from swallowed air, which also may act mechanically to raise the diaphragm, and from irritation of the stomach and intestines by their contents, particularly by excess of hydrochloric, lactic and butyric acid. They may come as reflexes from the sexual organs. They often come from toxemic irritations, par-

ticularly those produced by the intestinal toxins, and by alcohol, coffee and tobacco: the write rhas seen anginoid symptoms brought on in a neutrotic patient by a few whiffs of a cigar. They may be due to anemia. They occur frequently as a result of emotional excitement.

The symptoms are sensory and motor. The former are the most common, or, at least, the ones most often complained of by the patient. They include: Palpitation, tenderness over the precordium, abnormal sensations in the region of the heart, particularly pain, a sense of constriction and symptoms simulating those of angina pectoris, and sometimes sensations of a strange and fanciful character. The principal symptoms due to motor disturbances are those associated with cardiac arrhythmia and weakness of the heart action, including among the latter, fainting spells. Neurasthenic and psychasthenic symptoms are often associated with the local cardiac symptoms. The blood pressure is usually low.

The diagnosis, which is not always easy, is made chiefly on the symptoms, the presence of a source of nervous irritation, and the absence of signs of an organic heart lesion. If evidences of a heart lesion are found, it is well to give them full credit, even though they may be apparently overwhelmed by the neurotic symptoms. A mitral systolic murmur, however, which is audible only when the heart is overacting, and which is unaccompanied by a permanent increase in the area of cardiac dulness, usually may be interpreted as a functional origin; and cardiac arrythmia, of which the patient is subjectively conscious, in the absence of other signs of organic heart disease, can usually be referred to a functional origin; but, if the arrythmia is not attended with subjective sensations it is safest to interpret it as an evidence of myocardial disease. Ability to undergo physical exertion of considerable severity without dyspnea, suggests a functional condition. The neurotic character of a cardiac pain may be suspected if it originates spontaneously, that is, independently of physical exertion or mental excitement. A person lor family history of neurasthenia, hysteria, hypochondria or the neurotic temperament, strengthens the diagnosis of a functional disorder. In any case where the patient is past middle life the diagnosis must be doubtful.

Gastric Ulcer.—Levy says the Rontgen rays give us valuable aid in the diagnosis of ulcer of the stomach. The signs may result either from anatomical or physiological disturbance. In general it may be said the more chronic the ulcer, and the greater the anatomical deformity resulting therefrom, the more certain the Rontgen diagnosis. The ulcer leading to pyloric obstruction, to hour-glass deformity, to the "Nische," is readily diagnosed. In some acute cases the incisura, the delayed motility due to pylorospasm, and the sensitive spot, are suggestive. In some cases, especially in the very superficial ulcers, the X-ray findings may be negative. Among the anatomical signs, the incisura is sometimes encountered with ulcer. It results from a spasmodic drawing in of the wall of the greater curvature. The incisura, when present, is quite constant. Atropine may, however, relax it. It is also encountered, but more rarely, with ulcer of the duodenum, with gall-bladder disease, with chronic appendicitis, or any other irritation of the gastrointestinal tract.

The chronic ulcer with pyloric obstruction is readily recognized. The stomach is enormously enlarger, and owing to the atony the opaque meal drops to the bottom of the organ. The peristaltic waves are usually shallow, although in some cases exagerated as the result of hypertrophy of the walls. There is a marked disturbance of the motor function, the bismuth sometimes remaining in the stomach for days. The rest is half-moon shaped, and considerably to the right.

Haudek has called attention to the "Nische" as a symptom of ulcer. It is found in chronic ulcers with a crater, and particularly in ulcers that have penetrated into neighboring organs like the liver or pancreas. When the crater of the ulcer is still within the stomach wall, it shows itself like a small bud projecting outward from the main bismuth shadow. It is usually found on the lesser curvature. When the ulcer has penetrated into the liver or pancreas, forming the so-called 'Ulcus Penetrans Callosum" of Haudek, there is a large pocket in which the bismuth settles and remains. Above this there is a layer of fluid surmounted by a gas bubble. These ulcers are associated with hour-glass contraction, and consequently lead to characteristic deformity.

An hour-glass stomach is not infrequently encountered with ulcer, even without the 'Nische." Th stomach is mae up of two pouches, the food first enters the upper pouch, and gradually finds its way through a narrow channel into the lower one. The deformity may be extensive, the connecting channel usually

follows the lesser curvature. The diagnosis of hour-glass stomach rests entirely with the roentgenologist, and not with the surgeon. The operating table, with the stomach empty and collapsed, is not the place to make this diagnosis.

Haudek lays great stress on hypomotility as a sign of gastric ulcer. He claims that he always finds it in the florid ulcer. The delayed emptying is not necessarily due to the pyloric obstruction, but to the reflex spasm of the pydorus. While a six-hour rest is frequently encountered with gastric ulcer, it is not so constant that its absence rules out this lesion.

Holzknecht has called attention to "Schnecken" or "snail" from of stomach as significant of ulcer. The pylorus is found higher and more to the left than normal. In conjunction with other symptoms or signs, this form of stomach may be of some diagnostic value, but alone it is of comparatively little.—Arch. Diag.

Sterilization of Infected Wounds by Sunlight.—Leriche (Presse Medicale) reports bacteriological observations, conducted with the assistance of Mendeleef, on the action of heliotherapy of infected wounds. In the most favorable cases, those of recent wounds from which dead tissues had been excised and which had been opened out flat, a sterile condition was obtained in forty-eight hours, the first period of insolation lasted half an hour and the second two and a half hours. Exposed to sunlight regularly such a wound remained sterile for six days, at the end of which secondary suture was performed with successful results. In less favorable cases, e. g., deep wounds with irregular recesses and fractures, the sterile condition was obtained in four to six days, while in less recent and badly infected or imperfectly opened up wounds, a still longer period was required. Microscopical study showed that with the fluid oozing copiously from wounds exposed to sunlight bacteria are mechanically washed outward from the tissues, occurring at first in free suspension, but later filling numerous living leucocytes. Smears made before, during, and after exposures clearly revealed a phagocytosis which completes the effect of the mechanical disinfection. The pyocyaneus organism disappeared after two fifteen minute exposures, the vibrio of sepsis almost entirely after a half hour exposure, and the proteus after exposure on six successive days. Where the sunlight is rather subdued the wounds can be safely exposed for a long time; where bright and hot, small progressive doses are indicated, not exceeding fifteen minutes on the first few days. Where a wound cannot be properly opened up, as in the upper part of the thigh or the pelvis, heliotherapy should not be employed, but Carrel's method of drainage should be instituted.

Treatment of Cranial Denudation.—Laboure (Presse Medicale) writes concerning the treatment of extensive scalp wounds in which a portion of the cranial surface is entirely exposed. There is no tendency to granulation over the bone in such wounds, and epidermal grafts would not take hold. Laboure finds that to excite granulation over the cranium, all that is necessary is to drill a few small holes in the external table of the skull in order to set free the connective tissue of the diploe. From ten to fifty such holes may be made about one centimetre apart. Under a normal saline solution compress renewed every two or three days, reddish islets of granulation tissue will appear through the holes and extend over the bony surface. In a few weeks the bone will be completely covered, and over the granulation tissue epidermal grafts can be applied with confident anticipation of a successful result.

Successful Conservative Treatment of Early Gas Gangrene.—Frankau, Drummond, and Neligan (British Medical Journal) have acted upon the recent proof that gas gangrene was a disease of damaged muscles and was likely to be limited to single muscles or muscle groups. On this basis they have attempted to discover the infected muscles as early as possible and to cut short the disease by complete resection of each of those found involved. Even in cases in which the resections were so extensive as to render the limb useless, its practice gave better results than immediate amputation, and the latter operation was reserved for a time after the patient had recovered from the gangrene. Following the muscle resections the aftertreatment of the wounded part included the use of the lightest and thinnest possible dressings, exposure of the wound to the sunshine, and constant or intermittent irrigation by the Carrel method of some modification. These measures gave unexpectedly favorable results, as illustrated by the records of fourteen cases.

Ethyl Chloride as Anesthetic in War Surgery.—Boureau (Presse Medicale) highly recommends the substitution of

ethyl chloride for chloroform and ether in war surgery because of its rapid action, because it is much less toxic, having no deleterious effect on the heart, respiratory apparatus, liver, or kidneys, and because of its rapid elimination, all but one twentieth of the amount in the blood passing out within four minutes after its administration, whereas in the case of chloroform one-third and in that of ether one-seventh of the amount still persis in the blood after one hour. In military practice much time is saved through the rapidity of induction of anesthesia and also through the fact that immediately after the operation most of the wounded can leave the ambulance hospital in the sitting position, instead of recumbent. For the initial cleansing of wounds, extraction of missiles, ligations of vessels, and painful dressings, ethyl chloride is decidedly the agent of choice, and those who have taken it prefer it to ether or chloroform. Boureau's recent experience with it covers nearly 2,000 cases, including 212 missile extractions, 135 removals of bone fragments, fifty-seven amputations or operations on flaps, thirty-six resections, including the knee, shoulder, and elbow, twelve astragalectomies, twelve nerve sutures, etc. Not the least untoward happening attended the anesthesia in any instance, though operations lasting as long as an hour and three quarters were performed under it. All special inhalers were discarded in favor of a four layer compress of rather thick cloth or a mere handkerchief, on which two or three c. c. of kelene were dropped to start with. Although plenty of air was allowed the preanesthetic period never exceeded one minute. After fifteen or twenty seconds the dose of kelene was renewed and the cloth brought more tightly to the face, and a minute and a half or two minutes later, complete resolution was obtained, the corneal reflex disappeared, the pupils dilated, and the operation was begun. Anesthesia was then kept up by dropping about one c. c. of kelene on the compress every minute. Slight convulsive movements of the limbs were found to indicate the giving of a little pure air, when they promptly passed off.

Operation for Loose Semilunar Cartilage.—Rowlands, in The London Lancet, describes an operation for the cure of loose internal semilunar cartilage which is both simple and productive of the most satisfactory results. Before undertaking the operation one should be very certain that the diagnosis is correct and should also select his cases with some care, as a fair proportion of the recent ones will recover without operation. In those in which an operation is required the knee should be put at rest for two or three days to lessen the effusion. Then the skin is prepared from the middle of the thigh to the middle of the leg by shaving, washing with ether, painting with iodine, and applying a sterile pad. With the patient anesthetized the leg is held up for a few minutes to empty it of blood and a flat rubber tourniquet is wrapped very tightly about the middle of the thigh. With the knee in semiflexion and properly and completely draped with sterile towels, an incision two and one half inches long is made vertically over the space between the femur and tbia and one inch internal to the patellar ligament. It should extend half an inch below the upper border of the tbia. Sterile gauze pads are clipped to the edges of the wound and the joint is opened. With the edges of the wound retracted by an assistant the front end of the cartilage is detached with a knife and drawn forward and inward with a Mayo-Oschsner forceps. The middle and posterior portions are gradually separated from the tibia and the capsule, increasing flexion of the knee, and making access to the posterior end easier. Nearly the entire cartilage is removed. The knee is then straightened and the capsule is sewed with a continuous suture of fine gut, the skin with one of linen. A sterile pad is applied, secured by a sterile gauze roll and covered with a thick layer of cotton, extending from the lower third of the thigh to the upper third of the knee. Over all a firm bandage is applied. A second layer of cotton wool is put on and this is covered with a bandage very firmly applied. Then the tourniquet is removed and the knee slightly flexed over a soft pillow. This operation avoids all hemorrhage into the joint, minimizes the manipulation of the parts, and avoids infection. Aftertreatment begins at once by daily gentle passive flexion and extension of the knee, removal of the outer bandage and cotton on the fourth day, and the inner and the skin stitches at the end of a week. The patient is then allowed to get about in a wheeled chair and is permitted to walk a little with the knee stiff at the end of ten days. Massage, manipulation, and gentle active and passive movements are continued and increased so that by the end of a month or six weeks the movements and functions of the joint are perfect.

Possibility of Typhoid Infection Through Vegetables.—Melick (Journal of Infectious Diseases) prepared two plots of ground four by six feet and planted radish and lettuce seeds. One c. c. of a mixture of fresh typhoid feces and urine was distributed on the surface of three one litre agar flasks and incubated for eighteen hours at 37 deg. C. The growth was washed o ffand added to the original stool. This mixture was then diluted in about six litres of water and sprinkled on the soil with an ordinar ygarden sprinkler after which the soil received no further water except by natural precipitation. In another experiment radish seeds were planted in a bed that had been inoculated four days previously by a mixture of approximately one litre of excreta diluted with about six litres of water. In three outdoor experiments, extending from May to September, the Bacillus typhosus was isolated from garden soil, inoculated with typhoid excreta after forty-one, thirty-five, and thirty-four days. The organisms apparently became attached to the surface of the vegetables from their contact with the soil as there was no evidence indicating that the bacillus entered the interior of the plants. It was found that ordinary washing did not remove the bacteria.

The Leucocytes in Cases of Irritable Heart.—Briscoe, in the London Lancet, studied the leucocytes in a large number of cases of irritable heart and in a small group of normal controls and found that while at rest the irritable heart cases showed a slight rise or none at all above the average normal. While these patients were up and about, however, there was a considerable degree of leucocytosis. In many cases, specially those of long standing, there was also a relative and absolute lymphocytosis. The average increase in total white cells after exercise was about forty per cent. in the cases of irritable heart and about fifteen per cent. in the normal controls. The rise in polynuclears after exercise was twenty-four per cent., that in lymphocytes fortiy-eight per cent. in the irritable heart cases as compared with rises of thirteen and twenty-five per cent., respectively, in the normal controls. It was found that the intensity of the blood changes observed ran somewhat parallel to the severity of the clinical condition present. The occurrence of these blood changes in cases of this type, while not constant, was found to be sufficiently frequent to be of considerable diagnostic value as it represented at least one symptom which which could not be simulated. The absence of either of the changes was not found to be certain evidence upon which to exclude irritable heart.

A Blood Change in Gas Poisoning.—James Miller, in The London Lancet, studied the blood in forty-four cases of gas poisoning and found that there was an increase, both actual and relative, in the number of lymphocytes in those cases in fhich the symptoms persisted. In severe cases the increase was marked and of diagnostic value. In the absence of complicating disease which might cause a similar blood change, counts in which the percentage of lymphocytes approached that of the polynuclears indicated that the patient was still suffering from the effects of the gas. Slight increases in lymphocytes were found so frequently as to be of no significance. In some cases the occurrence of a diminution in the number of plyneuclears was noted and it accentuated the increase in the relative lymphocyte count. The blood change was found to appear early, usually within a month and persist for many months, along with persisting symptoms. The phenomenon occurred without reference to the gas which caused the poisoning and bore no relation to the type of symptoms present. Its cause was not established, but it seemed probably related in part to the chronic inflammation in the respiratory tract and of the gastric mucosa.

Root Absorption in the Deciduous Teeth.—Luciani (Bulletin de l'Academie de Medicine) says that the prevailing view that absorption of the roots of the milk teeth takes place because of the pressure exerted on them by the subjacent growing permanent teeth does not sufficiently account for the phenomena witnessed. Sometimes, indeed, removal of milk teeth, the roots of which have been only in small part absorbed, becomes necessary to permit eruption of the corresponding permanent teeth. Examining over two hundred milk teeth he had extracted, Luciani noticed that whenever the roots of a tooth had been completely absorbed the pulp of that tooth was in good condition; on the contrary, whenever the roots had remained almost or quite unabsorbed, the pulp had become sphacelated or disappeared. Apparently, a healthy pulp is a necessary factor in the proper absorption of the roots of the

milk teeth. The pulp brings about progressive absorption of the roots in order to prevent such compression of its own supplying vessels between these roots and the advancing permanent tooth as would lead to death of death of the pulp itself. He protests against the impression prevailing among the laity, and even in the medical profession, that the milk teeth nee not be given much attention because they are soon to be replaced by others. The special susceptibility of the milk teeth to necrosis of the pulp results in the presence, in over fifty per cent. of children between the ages of three and ten, of foci of dental or paradental infection. If the practitioner systematically had the mouths of children under his care examined by qualified dental specialists, cases of cryptogenetic osteomyelitis, so called growing fever, gland infection, etc., could doubtless be more thoroughly studied.

Cerebral Diplegia with Abnormal Flexibility of Ankle Joints.—Weber, in The British Journal of Children's Diseases, reports a case of a boy, five and one half years old, with abnormal laxity of the ankle joints permitting extreme dorsal flexion. There is no real muscular atony. The knee jerks are at times greatly exaggerated. At times the plantar reflexes are of the extensor type. There is an "overflow" of the abdominal reflex. The response is not limited to ocntraction in the muscles of the abdominal wall, but it involves considerable movement of the thighs and trunk. The condition probably dates from birth. The birth was a difficult breech presentation and some widespread damage to the cerebrum and possibly the cerebellum took place.

Marching Fractures.—Pirie (London Lancet) gives this name to fractures of the second third, or fourth metatarsal bones of the feet resulting from prolonged marching with heavy packs. The fracture occurs without the patient's being aware of it and the usual history is one of increasing soreness and pain in the foot which finally becomes unendurable. The mechanism of the fracture is probably as follows: The continued strain of marching with heavy loads breaks the arches of the foot, allowing the weight to fall abnormally severely on the central three metartarsal bones. These three bones are the weakest of the metatarsals and one or more of them finally gives way at its weakest point, which is near the head of the bone. The fracture is not due to direct violence, but results from a combination of muscular action and indirect violence.

Effect of Vaccinia on the Wellbeing of Children.—Kinloch, in The London Lancet, says that vaccinia has been alleged to prejudice the chances of infants and hamper their development in later years as well as to diminish their resistance to other infectious diseases. In discussing the latter point the author concludes from a study of 3,058 cases of febrile disease with vaccination scars and 746 unvaccinated cases, that there is no evidence that vaccinia prejudices the child's future welbeing as judged by his response to subsequent infections.

Eclampsia Not Prevented by Certain War Conditions.—It having been asserted that absence of eclampsia was due to low diet or to absence of coitus during pregnancy Lichtenstein announces that there has been no percentage decrease of eclampsia in Germany as a whole, or at least that such cannot be shown. In individual clinics some decrease in incidence can be accounted by various factors. In Leipzig a decrease began before the war; the birth rate has fallen off; cases from outside the city are fewer, etc. If eclampsia is less common so too is placenta previa, and for just the same reasons.—Zentralblatt fur Gynakologie.

The Treatment of War Neuroses.—Mann surveys the progress made during the war in the treatment of war neuroses. He began conservatively, prescribing rest, a full diet, hydrotherapy and electrotherapy and sedatives. The results were not encouraging. The purely neurasthenic manifestations had often reacted so satisfactorily that after weeks or months in hospital the patients were able to return to duty. But well defined psychogenic or hysterical phenomena, manifested in paralysis, contracture, cramp, astasia, tremor, and so on, were scarcely benefited by these conservative measures. Narocotics, such as hyoscin, morphin, opium, chloral and bromides, were practically useless. Wilmanns found that, under such conservative treatment, only 5 per cent. again became fit for active service, whereas 64 per cent. had to be discharged fro mthe army. Subsequent investigations had shown that of these discharged patients 75 per cent. were either just as ill or worse than before. Mann and others had been equally unsuccessful.

Turning to the treatment by hypnosis, he quoted the startling results claimed by Nonne of Hamburg, who alleged that 65.4 per cent. of patients suffering from "gross hysteria" were cured or relieved of their symptoms, and that of these 29.5 per cent. had been cured in one sitting. Nonne's claims had subsequently been reduced to cures in 50 per cent., but even this was a brilliant result. Nonne was convinced also that his results could be permanent, for some of his patients had endured the fighting about Verdun and the Somme for months without a relapse. Yet Mann found this treatment applicable onl yin a few cases. Its effectiveness depends largely on the personality of the physician, and few patients and still fewer physicians were qualified to undergo or practice it. Mann endorses Kaufmann's method of combined suggestion and severe electrical shocks with a few reservations. He referred to the cruelty of the torture inflicted, and admitted that there had already been two deaths under this treatment. In both cases an enlarged thymus had been found at the necropsy. He thought, however, that death could be avoided by better technique, notably by the use of the faradic current only.—Berl. Klin. Woch.

The Selection of an Antiseptic.—Philipowiczs (Wien. Klin. Woch.) speaks well of the use of hyperol in suppuration due to anaerobic organisms, and for the prevention of gas gangrene. It is a compound of hydrogen peroxide and urea, rendered stable by the addition of a trace of citric acid. When small pads of gauze containing hyperol powder are put into a wound cavity oxygen is slowly liberated. Uninjured tissues are not attacked, and the patient seldom complains of pain. Considerable leucocytosis occurs, and the growth of aerobic organisms is stimulated. If pus formed, free drainage was found to be necessary. In cases in which there was necrosis of tissue with little pus formation, balsam of Peru was used to promote local leucocytosis. Oxidizing agents also were found useful in the treatment of bone cavities and to stimulate growth of granulations. Tincture of iodin was used for routine skin disinfection in all simple wounds, the wound being first cleaned by washing with benzin. In hernia of the brain, which is assumed to be a symptom of encephalitis, tincture of iodin was particularly useful on account of its antiseptic and drying properties. To promote separation of the devitalized portions of the brain Scheide painted the protruding part energetically with tincture of iodin at each change of dressing, and of 250 cases so treated all did well. In abscess of the brain, or foul penetrating wounds, he irrigated the brain with very hot water, and either injected tincture of iodin or inserted gauze drains soaked in the tincture. To prevent the spread of infection from the skin or from infected parts of the brain, gauze soaked in tincture of iodin was laid around the protruding part.

Philipowicz treated frost-bite of the third degree and other forms of incipient gangrene, such as bedsores, by tincture of iodin and dermatol; the interdigital folds were painted with iodin and the dermatol shaken on. Small pads of gauze Saturated with iodoform were placed between the digits and the whole affected part covered with one fold of gauze. For shallow cavities hot potassium with one fold of gauze. For shallow cavities hot potassium permanganate solution was found useful. In wounds infected with B. pyocyaneus mercuric oxide solution, 1 in 1,000, was found very useful. A solution of camphor 60 parts, liquid carbolic acid 30 parts, absolute alcohol 5 parts, was used with success in suppurating affections of joints after tapping, and it was found that the injection might be repeated in a few days; iodoform emulsion was also useful for the same purpose, and the two preparations might be used alternatively. Alcohol was used for personal disinfection before operating, and corrosive sublimate for cleansing rubber gloves during an operation.—Brit. Med. Jour.

Scaphoid Scapula.—Nonne reports a case of this condition (first described by Graves) in a boy of fourteen with strongly positive Wassermann. The patient was pale, thin, and weak, but with normal organs. He presented another stigma of degeneration, viz.: rigid and tortuous radial arteries. The psyche was normal. The mother died paresis and aortitis. Scaphoid scapula has been seen in subjects of syphilitic, tuberculous, acholic, and psychopathic ancestry, and is one of the best recognized stigmata of degeneration. — Munechener Medizinische Wochenschrift.

Frequency of Gas Gangrene.—Cross states that of 2,796 severely wounded men in the first three months of the Verdun campaign 101 developed some form of gas gangrene. Of this number forty-four recovered.—La Presse Medicale.

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Treatment of Neuralgia and Neuritis by Ionization and Diathermy.—McGinn, in The London Practitioner, says that he has obtained good results from these methods of treatment, which are thus described: To treat neuralgia with salicylic ions, lint or felt pads are saturated with a ten per cent. solution of sodium salicylate. The pads are well moistened with hot water, the dry salicylate dusted over the wet surface, and an additional piece or two of lint laid over the salicyyate powder. They must be proportionate in surface area and in depth to the milliamperage intended to be utilized. For a current quantity up to 100 milliamperes in brachialgia, and 150 to 200 milliamperes in sciatic neuritis the pads may be of sixteen to twenty folds of lint varying in extent from twenty by twelve centimetres for the lower limb. In sciatica the pads should be applied to the skin along the course of the sciatic nerve on the painful side extending from eight centimetres below the crest of the ilium to eight centimetres above the popliteal space. Lead or tin foil, connected carefully to conducting wires attached to negative pole or binding screw, is laid on and firmly smoothed to the outer surface of the pad; the whole is then covered with a suitable piece of mackintosh or muslinette and secured to the body by a three inch bandage. The indifferent pad, saturated with salt solution and with a slightly larger surface than the active one, should be applied over the sacral region, or upon the opposite hip. Direct current, sinusoidal current, or a combination of the two may be utilized. The quality of the current will depend upon the result desired.

Treatment by diathermy is in many respects preferable to ionization. Dry application of elctrodes may be adopted, time is economized, and a larger quantity of current can be passed through the body. A through and through heating of the tissues is a very important result of its action. Diathermy is a high frequency current of low tension. The voltage is raised by a transformer from 100 to 2,000 volts, by which pressure the condensors are charged, which discharge across a very short spark gap. The disks are of copper, 1.5 centimetres in diameter. The treatment current is obtained through the secondary of a high frequency coil. The physiological action of diathermy currents is to raise the temperature of the tissues which they traverse. Its application may be made by a fine metal foil applied directly to the slightly dampened skin by immersing the foil in warm water, or by an absorbent pad about five millimetres thick soaked in strong salt solution interposed between the skin and the electrode. The size of the foil depends upon the region to be treated. Care must be observed that neither electrode becomes detecched from its support during treatment, as a very severe burn will be rapidly produced by the free terminal. The diathermic action is set in motion by a switch and the resistance is then slowly reduced until a sufficient quantity of current, indicated by the milliamperimeter, is passing through the body; if applied to the forearm about 300 to 400 milliamperes; if to the shoulders 700 to 800 milliamperes; the gluteal or sciatic region will take 1,000 milliamperes, and over the back as much as 2,000 milliamperes can be used. When an uncomfortably hot sensation is experienced reduction must be effected at once or a burn will ensue. In about twenty minutes the current may be diminished to zero, switched off, and the bandage, pads and electrodes removed. The bared limb will be flushed or sweating, and the skin will be red and hot along the border formed by the electrode. A suitable dusting powder will render the surface comfortable after the application. The treatment is to be repeated on alternate days for two or three months.

The Importance of Diet as a Factor in the Production of Pathological Changes.—Salant discusses, in The London Medical Lancet, the role that diet plays in the causation of disease and refers to different lines of inquiry furnishing evidence of its growing importance in pathology. That diet as a factor in the causation of diseases is suggested by the results of pharmacologic investigations which have been brought to light within the past few years for it has been shown that a definite relation exists between diet and pathological changes produced by well defined chemical substances, such as acetonitril, caffeine, chenopodium, and tartrates. He states that Rieger and he have frequently been impressed by the difference in the reaction to caffeine which was exhibited by dogs receiving different amounts of protein. A high protein diet, it was found, was conducive to increased resistance to this drug. In experiments on the toxicity of chenopodium carried out on different animals it was found that fatty oils modified the action of this substance. The

toxicity of the oil of chenopodium for cats and rabbits which had received cottonseed or cocoanut oil was diminshed at least 50 per cent in some cases. Rabbits fed on carrots resisted much larger doses of the tartrate than those which received oats and cabbage. Further investigations made more recently on the toxicity of this substance shows that the resistance of the animal wa svery markedly increased when carrot leaves were fed from four to eleven days before injecting tartrate. A high degree of resistance to tartrate was also shown when sweet potatoes were fed. A dose of 2.0 per kilogram failed to produce nervous symptoms or furnish evidence of renal irritation. Sodium tartrate proved to be most toxic when the diet consisted of oats. Experiments with tartrate on cats that received different diets failed to show any marked difference, but it may be remarked that in these animals the toxicity was markedly increased in starvation, which was also noticed in rabbits. That protection is also affored by diet against the injurious effects of some of the heavy metals was furnished by the results of experiments with zinc malate. Small quantities of this salt given intravenously to rabbits produced marked albuminuria in twenty-four hours. Rabbits which were fed on carrots for some time previous to the injection of the zinc malate exhibited a decidedly greater resistance to zinc poisoning. Studies were also made as to the effect of diet on the permeability of the kidneys in tartrate nephritis. These indicate that the injury to the kidney caused by this salt varies considerably with the diet. From 0.2 to 0.3 gm. of sodium tartrate given subcutaneously may retard the elimination of phenol-sulphonephthalein to a very considerable extent in rabbits when fed oats alone. The amount of dye eliminated had decreased by a half to two-thirds about five hours after the administration of 0.2 sodium tartrate per kilogram. When carrots alone were given for three or four days previous to the injection of tartrate and if this diet was continued for some time after the injection of the tartrate renal permeability remained quite satisfactory. The effect of this diet was noted even when the dose of the tartrate was doubled. The writer does not intend that the evidence he has presented shall be taken as a warrant for generalization, but believes this subject is full of promise of valuable results to medicine.

Accessory Food Factors (Vitamins).—Dakin observes that in recent years biochemical studies have indicated the necessity of the presence of certain substances in relatively small amounts in order to make an otherwise ample diet adequate for maintenance or growth. The earliest experiments of this kind were made at Cambridge by Professor Hopkins and Miss Wilcox. They found that mice furnished with a diet containing liberal amounts of fat, carbohydrate, and potein, which were much more than sufficient to furnish the energy requirements of the organism, failed to sustain life if a particular amino-acid, discovered by Hopkins, was not a constituent of the protein. This heterocyclic amino-acid, tryptophane, systematically named indole a-aminopropionic acid, was found as a constituent of many proteins, but not all. It is absent, for example, from gelatine, this being one reason why gelatine is an incomplete protein food. Hopkins and Wilcox found that addition of small amounts of tryptophane to the inadequate diet just referred to was followed by marked improvement in the condition and duration of life of experimental animals. A most valuable discussion on the importance of individual amino-acid groupings in proteins for nutrition and growth has recently been published by Hopkins in his lecture at the Chemical Society, May 18, 1916.

Later experiments showed that young animals could not grow when fed upon so-called "synthetic" diets cosisting of mixtures of pure proteins, fats carbohydrates, and salts, although maintenance might be secured for aconsiderable time. But Hopkins found that a substance or substances found in normal foodstuffs (for example, milk) can, when added to the dietary in astonishingly small amounts, secure the utilization for growth of the protein and energy contained in such artificial mixtures. The signifiance of these observations with regard to diseases such as scurvy, rickets, and beriberi was at once apparent.

Late work by Hopkins, and a host of followers, has served to emphasize the importance for nutrition and growth of these small amounts of substances which are often called "accessory factors" or "vitamins." Some of the substances which are found in milk, yeast, whole rice meal, and animal tissues, are extraordinarily potent in the relief of polyneuritis induced experimentally in birds by feeding on a "vitamin" free diet of polished rice. The exact nature of these substances is still obscure, although Funk, working at

the Lister Institute, Suzuki in Japan, Moore and co-workers, Cooper and others, in England have obtained partly purified basic products of high potency. The practical importance of these studies has been amply justified by the success obtained in the prevention of scurvy, beri-beri, and similar nutritional disorders among troops operating under conditions which render the abundant supply of fresh food difficult or impossible. By supplementing the diet available under such circumstances with small amounts of material rich in "vitamins," it has been possible to restrict the development of the disorders mentioned in a way that would have been impossible even a few years ago. A large number of experiments as to the most practical form of supplying the needed vitamins has been carried out under the direction of the authorities concerned, who were keenly alive to practical lessons to be learnt from the laboratory studies just referred to.

It is of interest to note that some recent experiments of Williams upon the curative action of various substances on experimentally induced polyneuritis in birds appear to show that certain synthetic pyridine derivatives containing a betaine-like ring possess this property in high degree. A substance intimately related to the purin compound adenine has been isolated from yeast, and also found to exert curative action. The necessity for purin derivatives for the synthesis of nuclear substance in vivo is noteworthy in this connection. It may reasonably be expected that the more intimate analysis of metabolic processes which is being made possible by the pioneer work of Hopkins will find many applications in the treatment and prevention of nutritional disorders.—Brit. Med. Jour.

The Schick Test in Poliomyelitis, Measles, Scarlet Fever, and in Normal Children.—Using the Schick test on a large number of normal children and scarlet fever patients, Zingher (Amer. Jour. of Dis. of Children, March, 1917) found that, of normal children between the ages of two and four, 32 per cent. show a positive reaction, as compared with about 65 per cent. of scarlet fever patients. With cases of measles between the ages of one and four, only about 10 per cent. more of the children gave a positive reaction than normal children of the same age group. Of 1,350 cases of poliomyelitis between the ages of one and four over 80 per cent. gave a positive reaction. The occurrence of such a preponderance of individuals susceptible to diphtheria among cases of poliomyelitis and scarlet fever suggests one of two possible causes: (1) In these cases there is a destruction of the natural diphtheria antitoxin, a possibility denied by several writers both in the case of measles, scarlet fever and poliomyelitis; (2) a susceptibility to one of the less contagious diseases indicates that the child is also more likely to be susceptible to other contagious and infectious diseases. That is to say, the relatively small proportion of children who suffer fro mpoliomyelitis, a disease only one-fifteenth as infectious as scarlet fever, would be more apt to be susceptible to diphtheria than children suffering from either scarlet fever or measles. Again, since scarlet fever is only about one-fourth as contagious as measles more scarlet fever than measles patients should give a positive Schick reaction. While

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Drainage and Treatment of Wounds.—Maj. W. Pearson, in The London Lancet, concludes from his extensive experience that: 1. Efficient mechanical drainage is the essential factor in the successful treatment of infection. 2. The cardinal principles governing drainage are: Freedom of exit; gravity; capillary action. 3. Drainage-tubes should not be employed unnecessarily. They should effect the purposes for which they are used, and should not act injuriously in the wound. 4. Dressings should not be tight, of close texture, or waterproof. They should be exposed to the air while discharge is profuse. 5. Continuous irrigation aids disinfection by mechanical removal of discharge. It is usually not feasible when dealing with large numbers of cases. It is not necessary in order to obtain good results. 6. Free administration of fluids to the patient is an important adjunct in the treatment of sepsis. 7. The value of concentrated saline solutions and antiseptics as aids to disinfection is doubtful and negligible. 8. The use of salines and antiseptics in no way diminishes the necessity for free mechanical drainage. 9. Vaccines are not helpful in dealing with infection in wounds of war. 10. Rest is an important factor in wound treatment and should never be neglected. 11. Most of the complications and sequelae of infection are due primarily to inefficient mechanical drainage, and are therefore preventable. 12. Delay in healing is almost invariably due to local mechanical causes.

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Acute Osteomyelitis of the Frontal one.—Tilley, in The British Medical ournal, reports the case of a woman ho developed frontal sinusitis following attack of "influenza." The sinus was pened and parts of the bony walls were und to exude pus from the diploetic aces. Drainage and hot fomentations d not relieve the condition and evi- nces of spreading osteomyelitis of the ontal bone appeared. About one month ter a second operation was performed, posing the entire frontal bone which as found to be generally inflamed and rtially necrosed. Some of the loose rtions carried the underlying dura ma- r and superficial parts of the brain sub- ance with them when removed. As uch of the inflamed bone was removed seemed possible and a multiperforat- drainage tube was passed around the argins of the bone remaining. The scalp was then replaced and hot fomentations were given for several days. The patient made a rapid and complete recovery, although she subsequently passed through an attack of erysipelas which began in the end of the original incision.

Diagnosis of Influenza.—Becher states that other febrile affections must be excluded; bacteriological blood tests must be negative; much weight must be placed on coryza and conjunctivitis in association with pains in the loins and limbs (all these may fail in supposed gastroenteric influenza); we may have influenza without local symptoms, manifested by headache and anorexia. Sharp but brief attacks of inflammation of the upper air passages are probably not influenzal. The frequent presence of herpes justifies the term 'herpetic fever."—Muenchener medizinische Wochenschrift.

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Are There Tetanus Carriers?—Colombino of Turin answers this question affirmatively. He has found the bacilli in the infected wounds of soldiers who never developed the disease (these men received preventive injections). Such men are carriers and endanger their comrades. La Presse Medicale.

The Charlotte Medical Journal

Vol. LXXVI CHARLOTTE, N. C., NOV, 1917. No. 5

ENTERO-COLITIS: SUGGESTIONS AND OBSERVATIONS.

By Sam Wilson, M. D., Lynchburg, Va.

Simply to say, the request to submit something for the perusal of this Journal's clientage, is profoundly appreciated is but to express myself in commonplace and unsatisfactory terms.

The caption of this manuscript may appear to some an irrelevance at this season of the year. Notwithstanding, however, the proverbial seasonal incidence of ileo-colitis, it is sufficiently frequent throughout the year to merit a painstaking investigation of any therapy advanced thereabout, that purports to stay the ravages of this dread disease—a disease, moreover, that, we all know, hurries to an untimely grave so many younglings of infancy and childhood.

Wherefore, we submit the following, to the urban and rural practitioner, interested in the welfare of the human race—accept it or spurn, as the mood may please.

Parenthetically, when we speak of entero-colitis, we refer, not to the amoebic form of that malady, easily demonstrable, but to what is commonly known as bloody dysentery, infectious diarrhoea or bacillary dysentery, also what is known as gas bug intestinal infection, or infection with the bacterium of Welch. All of this nomenclature is referable to an inflammatory condition of the intestine, of greater or less severity, due, either to infection from the gas bacillus, or the bacillus dysenteriae and its concomitant invaders, in the identity of the Bacillus Coli Communis and the Streptococcus.

To begin with, let us postulate the following—the clinical syndrome of gas bug infection is, in the generality of cases, indistinguishable from that of bacillary dysentery. Well, then, if the clinical symptoms of the two are indiscernible, how are we to make the differentiation in a given case, and how are we to determine what treatment to prescribe?

As we shall see a little later on, it is absolutely imperative to make the differential diagnosis, for the treatment of the one is the direct antithesis of the treatment of the other.

With this succinct foreword, let us contemplate the context. The cardinal symptoms of Entero-Colitis are:

(a) Constitutional (fever and prostration).

(b) Local (diarrhoea, with blood, mucus and frequently pus in the stools).

Called then to a case presenting this complexus, what are our possibilities?

(a) Infection with the bacillus dysenteriae (so-called Shiga and Flexner types).

(b) Infection with the gas bacillus (so-called bacillus Aerogenes capsulatus or the bacterium of Welch).

(a) Infection with the bacillus dysenteriae and its associated flora—bacillus coli and streptococcus.

A stupendous amount of work has been done by such men as Kendall and Smith, to determine just how the bacillus dysenteriae kills its host.

It has been demonstrated beyond peradventure, that the infective organism kills its host by the elaboration of toxins. Kendall has shown, if you take a strain of the bacillus dysenteriae and inoculate it into a media containing protein and no sugar; after a certain time, the result of bacterial growth in that media will be a powerful toxin, to be specific, it will require only 1-1000 c. c. of the toxin to kill a guinea pig.

Now, what happens if you add sugar to that same media, and inoculate the identical organism therein? The result of bacterial growth in that media is found to be non-toxic, to be specific, even 1-10 of the toxin will not kill the guinea pig. Manifestly, then, something has happened to the media which contained both protein and sugar to prevent toxin formation which did occur when no sugar was present. We know this something is the carbohydrate. In other words, the sugar protected the protein from the bacterial attack.

These experiments were repeated multitudinously. Their issue was always the same, viz.: when both protein and utilizable sugar are presented to the dysentery

bug simultaneously, the organism will utilize the sugar, and substantially leave the protein alone, to use the exact words of Kendall, "Fermentation takes precedence over putrefaction."

Theobald Smith has proven the same thing to be true of the diphtheria bacillus and the tetanus bacillus, also the typhoid.

Not germane, but interesting to note, this same philosophy is taken advantage of nowadays on the battlefields of France. Surgeons are dressing gunshot wounds with sugar, with the same idea in mind of protecting the tissues of the body from bacterial attack, and hence toxin-formation.

But, one may say, relatively speaking, few germs produce toxins. What of the great mass of non-toxin producing organisms? What of the associated dysenteric flora, the bacillus coli, and the streptococcus? Do they obey the pronouncement "Fermentation takes precedence over putrefaction?"

Now, what happens if you add carbohydrate to that same media, and grow the corresponding organism therein? The odor will not be offensive, reaction will be acid, will give off carbon dioxide and hydrogen, and, in addition, will contain typical fermentative products, in the form of lactic, acetic and succinic acids. In other words, the whole thing is a typical fermentation.

Reasoning, then, a priori, we see, fermentation again has taken precedence over putrefaction.

With the streptococcus, the same actuality obtains. It will utilize carbohydrate in preference to protein always, when both are co-present.

Noting this data, then, what happens when we treat Entero-Colitis by the old orthodox starvation method?

Nature, by the alvine discharges, cleanses the bowel. The physician comes along, and gives an evacuant to complete the purgation; the organisms have nothing to live on, but the intestinal secretions and the protein of the tissues, which they hence attack.

Now one thing is certain, the little patient has got to maintain his vital functions in order to live, and in order to do this, he has got to get energy from somewhere.

Physiologists tell us that the immediate source of energy is glycogen, which is stored up in the liver. They tell us this glycogen is utilized in the body as dextrose, being present in the blood to the extent of .2 of 1 per cent.

The important thing to keep in mind is, as long as the dextrose content of the blood is normal, the tissues of the body are greatly protected from bacterial attack. During starvation the dextrose constituent of the blood is rapidly used up, sugar thereby disappearing from the blood, thus lessening nature's defensive forces, and allowing the organisms to attack the tissues of the body untrammeled.

Advantage is taken of this fact in combatting dysentery in the wards of the Boston Floating Hospital, where the writer sojourned and studied. His experience in private practice with scores of cases, corroborate the dictums inculcated him by Kendall.

Treatment.

If the case is seen early, an initial purgative is given, with the idea in mind of ridding the intestinal tract of the invading organisms.

Subsequent to the initial purgation, the patient is fed lactose (milk sugar) in 5 per cent. solution. What does this do? It tends to change the meabolism of the dysentery bug from a protein splitter (proteolytic) to a fermentative one, thus safeguarding the tissues from disintegration. Moreover, by feeding the associated flora, i. e., bacillus coli and streptococci, sugar, they are made to produce, we said before, lactic, acetic and succinic acids. This is very important, for the dysentery bug can not live in an acid media, in fact, he is very sensitive to even small quantities of acid; therefore, in addition to changing his metabolism, we are enabled to inhibit his growth and proliferation by making him and his associated flora, acid producers, drowning him, as it were, in his own secretions.

An important point to bear in mind in feeding lactose is, that it is rapidly absorbed from the intestinal tract. If you want the organism to have at his disposal utilizable sugar, you have got to feed it frequently. I usually prescribe one teaspoon or one tablespoonful of a 5 per cent. solution every half hour, or more frequently, if the exigency of the case demands.

It may be argued, the dysentery bacilli may penetrate the intestinal mucosa, and go as far as the mesenteric lymph nodes. At first sight, it might appear, that they are beyond the reach of the carbohydrate taken by mouth. However, if we raise to normal the dextrose ingredient of the blood, it is conceivable, that we may affect them in the lymph nodes, therefore, we use infusions of dextrose under the

skin in all cases. It is important to bear in mind, that only chemically pure dextrose can be utilized for subcutaneous injection. Kahlbaum's chemically pure dextrose we always use, infusing it in physiological salt solution, the technique being similar to that of an ordinary hypodermoclysis.

In point of quantity to be used, it is customary to use 2 per cent. in a pint of salt solution. This may be repeated daily for several days, and should be begun as soon as the diagnosis is even strongly suspicioned.

It might aptly be asked, why not feed dextrose (ordinary table sugar)? For this reason. Certain bacteria, notably Bacillus Acidophilus, develop rapidly in dextrose, less rapidly in lactose, and there is always greater danger of causing sugar intolerance if the acidoduric bacteria, of which bacillus acidophilus is a variety, gain the upper hand.

Status of Nitrate of Silver Irrigations.

We want to mention tersely the data on this subject, as it appertains to the therapy of Entero-Colitis. Most intestinal astringements have proven useless and been discarded. Weak solutions of silver nitrate are no better than other drugs, but strong solutions unquestionably do good. Great reliance and faith is placed in them on the Boston Floating Hospital. The writer is an enthusiastic advocate thereof. In some clinics, 5 per cent. solutions are used; we follow the Boston idea, viz.: 3 per cent. solutions. It certainly seems reasonable to presuppose, if the ulcers in the intestine can be reached by a sufficiently strong solution of silver nitrate, the process of healing will be accelerated, for certainly ulcers in other parts of the body yield to such treatment.

The technique is the same as any colonic irrigation. We use one pint of a 3 per cent. solution, allowing it to run in, withodrawing the tube, and making no effort to recover the same.

In our consultation work, we have experienced some difficulty in getting our colleagues to try this method. The idea of injecting 240 grains of silver nitrate into an infant's rectum sufficing to strike terror to the uninitiated heart.

Whether you decry the use of silver nitrate or not, in these cases, the writer's feeling is akin to ecstacy, when he enters the sick room, sees delirium, like a reckless charioteer, seize the reins of the little intellect, and, know, and feel that to combat this dread disease, he has in his armamentarium such a drug as the nitrate of silver.

We can summarize our experience with silver nitrate injections in these words: "In a certain ratio of cases, an early injection of silver nitrate hastens the disappearance of blood and pus from the stools, and sohrtens the course of the disease. In late cases, where blood and pus persist in the movements, the ulcers can be stimulated by silver nitrate injections, and the stools cleared." We rarely have to use over two injections in the course of a morbidity. Within the first 24 hours improvement usually begins.

We have frequently been asked the question, Does not this procedure excruciate your little patients? 'Tis true, I have heard it remarked, that such does occur in adults, but, in pediatrics, from an observation o fa myriad of cases, I can attest, that never, save in one instance, have I ever seen any discomfort, much less excruciation result therefrom.

B. Gas Bacillus Infection.

We see many cases of gas bug infection that can not be differentiated from infectious diarrhoea by the symptomatology. It is all important to recognize that fact, because the treatment of gas bug infection is diametrically opposite to that of bacillary dysentery.

The gas bacillus is a spore forming organism, and has a characteristic growth in milk, producing, what might aptly be termed, "Stormy fermentation"; that is, following its growth in milk ,the casein of the milk is seen to be honeycombed with little holes, due to the evolution of gas, whence its name. Herein is the instrumentality for detecting this organism. Any county practitioner has at his disposal this technique of precision. Take a sterile test tube half full of whole milk; inoculate it with a little of the feces to be tested. Place the tube in water and boil the water for three minutes, then incubate in a stove, thermos bottle, or what not, at body temperature, for 18 hours. By so doing, all bacteria not in the spore state are killed, and the development of the spore sis unrestrained. The characteristic features of the growth are, the casein is largely dissolved, the odor is that of rancid butter, while the diagnostic thing, is the presence of myriads of little holes all through the casein, caused by the evolution of gas. This is absolutely diagnostic. It is spoken of as foamy fermentation, the casein appearing shot through like a piece of honey.

Now [illegible] as to the further [illegible] organism:

The gas bacillus is a typical fermentative organism. It utilizes sugar with great rapidity. It does not utilize protein. In fact [illegible] milk—buttermilk, is [illegible] to its development.

Reasoning then [illegible] as the gas bacillus derives its pernicious activity from the excessive fermentation of sugar (producing acids that give the irritative phenomena analogous clinically to dysentery) the logical thing to do is to cut out the sugar and to administer a food high in protein (buttermilk).

We know, the use of buttermilk has been tried empirically for years in diarrheas, without any knowledge of its scientific explanation. The above data explains why some cases of diarrhoea respond so promptly to buttermilk therapy, and why others do not.

Were I a rural practitioner, called to a remote hamlet to see a case with the symptom complex [illegible] referred to, in the absence of the chemical test, I would apply the therapeutic one.

If in doubt, it is always wise to give lactose first, for you are less likely to do irreparable damage. If the case does badly on lactose, and you cannot, for one reason or the other, examine the dejecta, it is well to try buttermilk, for if the diarrhoea is due to a gas bacillus infection, the response will be at once manifest.

In conclusion. The idea of changing the metabolism of bacteria by administering different foodstuffs, is a recent one. We believe it is the most important field in the realm of infantile therapy and dietetics.

The attempted reformation of bacteria, thus relieving the malady, has been left to Arthur I. Kendall, with whom the writer worked, and to whom, as an honest observer and friend, our heart will oftimes revert with feelings of love and affection.

Kendall's idea is succinctly this: Inasmuch as toxins result from protein breakdown, inasmuch as death is frequently due to toxin formation and absorption, and inasmuch as the products of fermentation antagonize the products of putrefaction, it naturally follows, the logical thing to do is to create a condition favorable to fermentation, when the putrefactive organisms are in the ascendency, and to create a condition favorable to putrefaction, when the fermentative organisms are so. That, because, in the language of the Pharmocologist, fermentation and putrefaction are "antagonistic and incompatible."

DIAGNOSIS IN CHILDHOOD DISEASES.*

By R. H. Perry, M. S., M. D., Nashville, Tenn., Assistant in Pediatrics Vanderbilt Medical School; Attending Pediatrist to the City and Vanderbilt Hospitals, Nashville, Tenn.

On account of certain anatomical and physiological diffrences, many diseases in infants and small children vary in their course and intensity from the same diseases in adults. Moreover certain diseases appear only in infants and children. As examples of peculiarities of diseases in the young may be noted the frequency of convulsions, especially as an initial symptom in the eruptive fevers, tonsillitis, pneumonia, and gastro-intestinal intoxications; the occurrence of opisthotonos in pneumonia of the upper lobes; the presences of "air hunger" in acidosis simulating the Cheyne-Stokes breathing of tuberculous meingitis, and the wide variations in temperature from slight causes.

The proper appreciation of diseases in childhood is possible only with a thorough knowledge of the normal development at different ages. This is especially true in the diagnosis of the various nutritional disturbances. Not only this, but the normal variations in the heart beat and respirations, as well as a proper appreciation of the various kinds of stools is absolutely essential.

In a general way diseases in children group themselves into three divisions.

First—Diseases of the earliest stage of life, the nursing period. At this age are encountered not only those abnormal conditions arising in utero or injuries received during labor, the so-called diseases of the newly born; but also the various nutritive diseases that have been so completely described by Finkelstein.

Second—With the second year of life, when the child begins to crawl about and its diet approaches that of the adult, other diseases depending on dirt infection occur—as stomatitis, angina, tuberculosis, intestinal parasites, infectious diarrhea, and the various eruptive fevers, the so-called childhood diseases.

Third—After the beginning of school-life diseases in children approach more closely those of the adult. The nervous

*Read at the Nashville Academy of Medicine October 16, 1917.

strain of school producing various nuroses as hysteria, myopia from reading and writing in insufficient light, and various orthopedic defects from improper posture. Other important diseases occurring at this time are chorea, acute rheumatic fever, and endocarditis.

A full understanding of the peculiarities of diseases in children and their unusual susceptibility to infection will enable one to make an early and correct diagnoses, thereby preventing a great deal of suffering and much loss of life. This is especially true for the first three years of life.

In the handling of any pediatric case one of the most important things is to obtain a careful history. This can always be obtained from the mother or nurse. The fact that an infant cannot talk, and an older child does not have any imagination to aid in multiplying his complaints is of aid rather than a hindrance in making a diagnosis. The family history is especially of value in cases of suspected tuberculosis and syphilis. A knowledge of the surroundings in which the child lives is often of value in diagnosing tuberculosis and malaria. Points in the child's history to be determined are the character of birth, whether normal or instrumental, the methods of feeding, how long breast fed, character of artificial feeding, when weaned, etc.; the general development; occurrence of convulsions, and the character of all previous illness. For the immediate illness the important points are the mode of onset, the number and character of the stools, the character of vomiting if present, loss of weight, cough, fever, pain, convulsions, and the previous exposure to contagious diseases. A clear history is especially of value in the diagnosis of scurvey, pylorie stenosis, acidosis, cyclic vomiting, poliomyelitis, intussusception, and the various contagious diseases.

A diagnosis, however, should not be made on the history alone. A physical examination should always be done. Failure to make a correct diagnosis in infants and children is generally due to a lack of a thorough examination. The patient should be stripped, but sufficiently protected from cold, especially if premature or marantic. Unless the patient is stripped many things will be over looked.

How well I remember one case in which I treated a child for enuresis for several weeks, having only examined the urine to be sure there was no pus present, and also made sure a circumcision was not needed, only to find when he did improve and was stripped for a thorough examination that he had a well developed case of Pott's disease! A proper examination when first seen would have saved this little fellow a lot of needless suffering. A physical examination where possible should be done in natural light, as it is very difficult to detect jaundice as well as differentiate the various rashes by lamp-light.

Of the various routine methods of physical examination inspection is by far the most important. Among the diseases diagnosed in this may be mentioned marasmus, scurvey, rickets, cretinism, mongolian idiocy, microcephalus, and other forms of mental deficiency, acute laryngitis, membranous laryngitis, jaundice, laryngismus stridulous, tonsillitis, and stomatitis. The facies in many conditions is typical and at once gives us a clue to the diagnosis. For example in tuberculous meningitis, nephritis, and adnoids the facial expression is characteristic.

In this connection it may be well to mention that measurement of the total length, length of extremities, and the circumference of the head and chest should always be made in diagnosing conditions as microcephalus, hydrocephalus, cretinism, chondrodistrophy, and the various forms of dwarfism. Weight, of course, is absolutely essential in the diagnosis of the nutritional diseases.

Confusion may arise in the differentiation of rickets from cretinism, mongolianism, and hydrocephalus. A clear mental picture of these conditions is necessary to differentiate them. Those cases of marasmus showing spasticity with retraction of the head may suggest meningitis, but the depressed fontanel is usually sufficient to differentiate them. Cases of malnutrition especially the type occurring after a severe dysentery, developing oedema may suggest nephritis, but an examination of the urine in the majority of cases will show that it is albumen free.

In all cases showing retraction of the head, difficulty in swallowing and a persistently [illegible] so-called cracked, high-pitched [illegible] we should suspect [illegible] and make a [illegible].

In examining [illegible] with the mother holding [illegible]. Crying should not interfere [illegible] as the infant is forced [illegible] to stop crying and take a deep inspiration. Unless one remembers that the normal

respirations under one year vary from 30-40, respiratory diseases will often be erroneously diagnosed. The high-pitched sounds in the region of the bronchi may be mistaken for bronchial breathing. This possibly accounts for many of the so-called abortive types of pneumonia, or as they have been aptly termed "nocturnal pneumonias." Another common error that is frequently made in the diagnosis of respiratory diseases is a failure to recognize fluid under marked signs of bronchial breathing. Bronchial breathing heard all over the chest (front, back, axilla, and apex), almost without exception means that the plural cavity is filled with fluid. In these cases an exploratory puncture should always be done. Cases of pneumonia that run long courses—the so-called unresolved penumonia—should also have the chest tapped as pus is often present.

Among the most difficult cases to diagnose are those cases of pneumonia where the signs are not clear and the case simulate appendicitis. If the case is one of pneumonia there is no resistance to the abdominal wall, the pain is superficial, the respirations are more of the abdominal type, and the leucocyte count is higher than in appendicitis. Whenever an abdominal condition is suspected in an infant or small child a rectal examination should be done. This will prove of especial value in the diagnosis of appendicitis, intussusception, and tuberculous peritonitis. In the latter condition an anaesthetic should be given if necessary to relax the abdominal muscles.

Other important points in chest diagnosis are—those cases showing typical pneumonia symptoms and temperature, but absence of physical signs until after the crises; cases showing progressive involvement of different lobes, and cases showing marked meningeal symptoms. At this point it might be well to mention that symptoms of meningitis occurring during the course of a pneumonia are usually due to meningism, but where the signs appear several weeks after the disease is apparently cured it is due to pneumococcaus meningitis.

Another point to remember in the diagnosis of pneumonia is that not all pneumonias under two years are of the bronchial type. Typical labor pneumonia—as shown by the X-ray—often occurs during infancy.

Other chest conditions of importance are tuberculosis, with signs principally in the nipple regions, or if it be an involvement of the bronchial nodes the presence of D'Espines sign; cases of recurrent bronchitis, and bronchial asthma.

The occurrence of cardiac disease in the young is not at all infrequent. Under two years the disease is usually congenital, after that time acquired. The majority of congenital lesions are a patency of the intraventricular septum, an open foramen ovale, or a stenosis of the pulmonary valves. In the latter condition there is cardiac hypertrophy, marked cyanosis, leading to the expression "blue baby," polycythemia, and clubbing of the fingers and toes. The occurrence of endocarditis as a rheumatic involvement should always be kept in mind, as well as the danger of cardiac paralysis in malignant cases of diphtheria.

Percussion of an infant's or small child's chest should be light, otherwise abnormal signs will be elicited when there is no pathology present. Palpation of the chest is worth little in the young.

Obstructions in the larynx causing retraction of the chest wall may be due to acute or membraneous laryngitis. These may be differentiated by the fact that the obstruction in acute laryngitis is inspiratory while in the membraneous form it is both inspiratory and expiratory. Bronchopneumonia and retro-pharyngeal abscess may be confused with laryngitis of the membraneous type.

In examination of the abdomen as previously mentioned—if there are any symptoms pointing to abdominal pathology then a rectal examination is indicated.

Other important points are the large size of the abdomen in rickets, chronic intestinal indigestion, and Hirschsprung's disease; the occurrence of umbilical hernia; and the occasional occurrence of malignancy affecting the kidney. Enlargements of the liver and spleen are frequently encountered, rickets being one of the most common causes. One of the most important abdominal symptoms is distention occurring during the course of pneumonia, typhoid, and malnutrition. Often this is a fatal symptom.

The most frequent abdominal conditions in infancy are the various types of diarrhoea. These may be due to a simple food injury, or to some form of infection. For this reason an examination of the stools is indicated as a routine measure not only in all diarrheas, but also in all nutritional disturbances. The stools show not only diarrhoea and constipation, but also fat and sugar intolerance and curd indigestion. Except in the case of worms a macroscopic examination is

usually all that is necessary. Only in occasional cases is it necessary to make a chemical examination.

Much has been written recently on the diagnosis of poliomyelitis in the pre-paralytic stage. The cases we see however will be most diagnosed after the paralysis has occurred. A history of fever, extending over a few days, with pain and hyperesthesia, the sudden development of a flaccid paralysis involving usually one or both legs, or the arms and legs, with loss of knee jerks will usually make the diagnosis clear.

In acute cases showing signs of meningeal involvement a lumbar puncture should be done without delay. Only in this way can we differentiate the various types of meningitis, and distinguish true meningitis from meningism.

Children two years or over who have repeated convulsions, even at several months intervals, should be considered as epileptics. Where there is any question as to a child's mentality a Binet test is of aid in placing him in his proper mental class. In cases of juvenile delinquency and retardation in school we should always look for some physical defects as being the chief etiological factor.

Chief among the skin lesions of early life are the cutaneous manifestations of syphilis, the eczematous condition known as the exudative diathesis, ring worm of the scalp, urticaria, and the various eruptive fevers. Of especial interest are the toxic rashes—the so called "milk rashes" autitoxin rash, and the scarletenal eruption occurring after burns.

An examination of a child is not complete until one has examined the ear drum. In diseases of children the ear speculum is of more importance than the stethoscope. An examination of the ear will often make clear an unexplained temperature. In all cases where the pyrexia is unexplained the first places to look for the cause are (1) the middle ear; (2) the pelvis of the kidney, and (3), the throat. A simple redness of the throat in an infant will often cause a temperature of 103 to 104 degrees. For this reason temperature alone is an unsafe guide in the diagnosis of childhood diseases. Even in the smallest babies a sufficient amount of urine to be examined for pus can be obtained. Other conditions causing obscure recurrent pyrexia are—the various blood diseases, intestinal parasites, tuberculous lymph-modes, and encysted tuberculous empyema.

The opthalmoscope should always be used in cases showing organic changes in the nervous system. Without such an examination the diagnosis of Amaurotic family idiocy is impossible,, as the diagnoses depends on finding the "cherry-red" spots in the region of the macula.

Anaemia in children is usually of the secondary type, and the teeth and tonsils should not be overlooked as the causative agents. An interesting form of anaemia in infants is the psudo-lymphatic anaemia of Von Jaschs. In certain diseases, other than anaemia, the blood picture is of aid in diagnosis—thus in whooping cough and bronchial asthma the blood shows characteristic changes.

Where the physical signs are not sufficient for a diagnosis one should resort to laboratory tests. Of especial value are the Von Pirquet cutaneous test for tuberculosis, and the cutaneous inoculations and intra-dermal injections of various proteid substances in cases of food idiosyncracy. Blood smears for malaria, Widal's for typhoid, and Wassermann tests for syphilis are indicated in the smallest babies the same as in adults. X-ray examinations should be made in all cases of suspected pyloric stenosis. No bably should be weaned simply because the mother's milk looks "blue," without first having an analysis made.

In conclusion it may be said that accurate diagnosis in pediatric cases, involves not only a thorough knowledge of the peculiarities of diseases in the young, but also some knowledge of the various specialties as otology, laryngology, neurology, and dermatology.

A MODERN PROPHECY.

By Benjamin K. Hays, M. D., Oxford, N. C.

In the fifth year of the rule of Woodrow there was a pestilence in the land of America. Many there were who were smitten with typhoid fever and many there were who were smitten with tuberculosis and many infants died with summer diarrhea.

Now in those days the Lord had given to the people of the North State a governor with much wisdom, even Beltebickett, the Governor of the State. And Beltebickett meditated day and night upon those things which were for the good of his people. And Beltebickett dreamed dreams and saw visions. And the Lord revealed unto Beltebickett the sore affliction of his people because of much tuberculosis, typhoid fever and infant diarrhea.

And Beltebickett made a decree to bring unto him three wise men of the

school of Aesculapius who might reveal unto him the cause of the tuberculosis, typhoid fever and infant diarrhea that sorely afflicted his people. And the master of his eunochs brought unto him Rankinvich, McBrayeroff and Laughinghouski; children in whom there was no blemish, but well favored, and skillful in all wisdom, and cunning in knowledge, and understanding science, and such as had ability in them to stand in the governor's palace and deliver unto the governor the reason of much tuberculosis, typhoid fever and infant diarrhea. And the governor communed with these men filled with much knowledge and skill in all learning and wisdom.

Then sayeth Beltebickett unto Rankinvich McBrayeroff and Laughinghouski, "Oh, Rankinvich, McBrayeroff and Laughinghouski, wherefore are my people sorely afflicted with much tuberculosis, typhoid fever and infant diarrhea?"

Then answered Rankinvich, McBrayeroff and Laughinghouski and said, "Oh, Governor, live forever. Inasmuch as thou hast sent for us and hast demanded of us why there is much tuberculosis, typhoid fever and infant diarrhea among thy people, we will answer thee, oh, Governor, concerning this thing.

"It is a rare thing that the Governor requireth, for it has been believed among thy people that there is none other who can show it before the Governor, except the gods, whose dwelling is not with flesh. But there is a high God in heaven, oh, Governor, who has revealed this thing unto us and we will show you both the cause and the cure of this sore affliction."

Then answered Beltebickett and said unto Rankinvich, McBrayeroff and Laughinghouski, "Surely ye have much wisdom and the most high God hath in truth revealed this thing unto you. But speak not all at once, lest by excess of verbiage there arise confusion. Stand forth, Rankinvich, and answer me, why are my people afflicted with much typhoid fever?"

Then spake Rankinvich and said: "Oh, Governor, there is but one cause for typhoid fever and that one cause is eating dung, even human dung." And the Governor was astonished.

Then spake Rankinvich again and said: "Wherever human beings live and wherever there is human habitation, there doth the soil and the surface of all the earth thereabout become polluted with human dung. And all the streams that flow through the land are polluted, even the little brooklets and the mighty rivers and the lakes and the ponds, even from Dan to Beer-sheba.

And McBrayeroff said, "From Murphy to Manteo."

And Laughinghouski said, "From Currituck to Cherokee."

And Rankinvich said: "The open wells of the land into which surface water floweth are all polluted. And the over-head chains of the open wells are handled by human hands upon which there is much filth. The filth passeth from the hands of him who draweth the water to the chain of the buckett, even the wet chain, and from the wet chain the filth droppeth into the water within the bucket. Such water would fill with horror thy servant, Shore. For Shore taketh of the water one single drop and he looketh thereat with a microscope and exclaimeth, "Much colon bacilli!"

"But not from water alone, oh, Governor, do thy people obtain dung, even human dung. Human dung is a breeding place for flies. Human dung is a feeding place for flies. Human dung is a resting place for flies. Upon the feet of flies is there much human dung. Therefore, oh, Governor, let it be known among thy people who eat food upon which the foot of a fly hath rested, even with that same food do thy people eat human dung. But know, oh, Governor, that water is not the only place from which thy people obtain dung, and flies are not the only means by which dung is served with food. In the milk consumed by thy people there is much dung. Upon the hands of the milker there is dirt and mixed with the dirt upon the hands of the milker there is dung. Even in the dirt beneath the finger nails upon the hands of the milker there is dung. Upon the tail of the cow there is filth. Respect for thy feelings causeth me to withhold from your excellency the nature of this filth upon the tail of the cow, but be it known unto you that it passeth from the tail of the cow into the pail of milk and is served unto your excellency for breakfast. Not by fasting and by prayer can a dairyman obtain clean milk. Not by clothing himself in sackcloth and ashes can a dairyman obtain clean milk. Clean milk can be obtained only by the use of much soap and water, even hot water. upon the hands of the milker must there be used soap and water. Upon the udders of the cow must there be used soap and water. Upon the pails for the milk must there be used soap and water. Clean stables and clean stable yards must also be provided if the milk therefrom is to be

free from dung. Tell thy people, oh, Governor, if they would be free from typhoid fever, to drink water that is pure. Tell thy people t odrink milk that is pure. Tell thy people to eat no food upon which flies have rested."

Then said Beltebickett unto Rankinvich, "Return, oh, Rankinvich, return to thy abiding place and make it known unto all my people this thing which thou has made known unto me."

And the Governor, even Beltebickett, spake again and said unto McBrayeroff: "Stand forth, McBrayeroff, and reveal unto me, if thou canst, why my people are sorely afflicted with tuberculosis."

Then McBrayeroff opened his mouth and said:

"I think myself happy, Governor Beltebickett, because I shall answer for myself this day before thee touching all the things whereof thou dost inquire.

Especially because I know thee to be interested in all things which pertain to the health of thy people. Tuberculosis, oh, Governor, is contracted by eating and breathing human spit."

And the Governor was astonished.

Then McBrayeroff said:

"In the mouths of thy people are many living germs and even though a man appear before thee in perfect health, yet is his mouth but a breeding place for disease-producing germs. A healthy man may be likened unto a well governed city. Robbers may enter and murderers come in and straightway the police lay hands upon them and they are cast into utter darkness. But the weak are not so. When germs enter the body of the weak man, even the germs which could gain no hold upon the strong man, they overcome that weak man even as robbers lay waste the city that is not strong and with rage and fury destroy it utterly.

"Therefore, oh, Governor, not only thy people be taught not to eat and breathe human spit, but they should be taught to do those things which mage a man strong. Pure air should they breathe, even out-door air, and pure food should they eat and much pulse, but wine should be kept far from them. Much sleep should thy people obtain, thy young men and thy maidens and the mother with an infant at her breast. Care and worry should be unladened. Such, oh, Governor, are the means whereby thy people can free themselves from tuberculosis."

Then answered Beltebickett and said: "Surely, McBrayeroff, the most high God hath revealed this thing unto thee. Return to thy abiding place and call unto thee all those that are afflicted with this sore affliction and reveal unto them this thing which thou has revealed unto me."

Then said the Governor unto Laughinghouski, "Why are my people afflicted with infant diarrhea, and why do much babies die? Why do the babies who should grow into strong men and cast votes, even democratic votes, die with summer diarrhea?"

Then spake Laughinkhouski and said:

"Oh, Governor, even as Rankinvich hath said unto thee that dung causeth typhoid fever and as McBrayeroff hath said unto thee that spit causeth tuberculosis, be it known unto thee, oh, Governor, that the water which babies drink and the food which babies eat is not free from dung, nor is the spit from the mouth of the folk who are grown kept away from the mouths of infants. Where those things are done among thy people which prevent thy people from having typhoid fever and which prevent thy people from having tuberculosis, even among such people is there no infant diarrhea. Teach thy people, oh, Governor, to keep from their infants' mouths the spit of others; teach them to keep from their infants' mouths the dung of others; teach the mothers throughout thy realm to feed their infants only with the milk of their paps, and then, oh, Governor, will infant diarrhea disappear from among thy people. Then will the babies not die, but will grow into strong men, even like unto such a man as Teddy Roosevelt."

Then said the Governor: "Better they should eat the spit and the dung." And the Governor swooned.

Then Laughinghouse spake again and said:

"On the night of the day wherein the master of thy eunochs came unto me and said, "The Governor hath called thee to come unto him, that he may confer with thee concerning the health of his people," even that same night as I lay upon my bed I saw a vision:

"A certain man had a daughter sick unto death with fever, even typhoid fever. And the same man had a son living in the same house wherein the girl lay sick with a fever and the son was sorely afflicted with tuberculosis. And in the same house wherein the girl lay with a fever and the boy lay with tuberculosis was an infant with summer diarrhea. And the man who was the father of the girl boy with tuberculosis and who was the father of the infant with diarrhea was also the master of the house. In that house no window was open and no door

was permitted to stand ajar. Yet flies were there in great numbers. In the yard of that house was a hog pen and the hogs in the pen were in perfect health. From the pen of hogs arose an awful stench. Near unto the hog pen was the family privy. And the odor of the dung thereof was an offense unto the nostrils. Between the hog pen and the privy was an open well. The hog pen was on the right thereof and the privy was on the left thereof, and into that well flowed surface water, both fro mthe hog pen and from the privy.

"And as I looked, the man of the house went forth and sought the house of the high priest. With many tears and much grief he begged the high priest to beseech the high God of heaven to have mercy upon him and restore his children to health. And as I looked the high priest fell upon his knees and in fervent supplication besought the high God of heaven to have mercy upon the man and to restore his children to health. And even as I looked I heard a voice saying unto the high priest: "Your prayers are a weariness unto man and to God. And when ye spread forth your hands I will hide mine eyes from you; yea, when ye make many prayers I will not hear. Your hands are full of blood. Wash you; make you clean; put away the evil of your doings from before mine eyes; cease to do evil; learn to do well; seek judgment; hear my messengers and learn to live by obeying my law."

Then said Beltebickett to Laughinghouski: "This vision was a direct revelation from the most high God."

Then Beltebickett thanked Rankinvich, McBrayeroff and Laughinghouski for what they had said, and the three went out to lunch.

INFANT FEEDING PROBLEMS.*

By J. E. Kerr, M. D., Lilesville, N. C.

My paper is read for the benefit of the weaker members of the profession. There are those among us who are not going to read and improve ourselves and as a consequence the public is going to suffer. I offer this paper in extenuation of our "professional unpreparedness."

A doctor who has studied with great diligence for years the problems of infant feeding may have evolved some striking formulas for the substitution of mother's milk but his ability to demonstrate it on the living baby will meet with many more failures than successes and I have concluded after years of disappointment in substitute feeding to try the wet nurse in every available case.

When confronted with the absolute necessity of a change from either the mother's milk or a diet on which the mother has depended for substitute feeding with regular loss of weight to the infant let your first thought be the securing of a wet nurse.

I shall not dwell on the necessity of the blood tests for syphilis, tuberculosis, etc., etc., for like of time but I refer you to the August 11th edition of the Journal A. M. A. on the methods of wet nursing as well as the securing of mother's milk for substitute feeding. Our state President, Dr. I. W. Faison, participated in the discussion on this subject as reported by the Journal and I will be glad to have him make a report to this meeting his deductions on the subject. I have tried it successfully this summer. I now have a very striking case in my practice, of a baby, whom I found desperately ill. Having found a wet nurse I removed the sick child to the home of the nurse. During the first week or ten days the child got a bare start but during the third week it gained 14 ounces. I do not believe it could have been hardly possible to have saved the child's life by any other method than the wet nurse.

I feel sure I have, at least, been instrumental in saving one baby for my state this year and if each one of us can do that well that will mean a saving of over 1,700 children each year which before this have filled untimely graves. I have prepared this short paper not for your entertainment but for use and I believe it is younr bounden duty to investigate its merits. Through your influence mothers and civic leagues can be induced to encourage the practice of this lost art.

You will not need to split hairs over what constitutes a good wet nurse. If you find a healthy looking woman with a normally developed child secure her services then and there if you can. Drs. Abt and Hoobler advise against putting the baby to the wet nurse's breast but advise expressing the milk and feeding it to the child from a bottle. Any excess is put in sterile bottles and kept in a refrigerator until needed.

If you can't have a wet nurse borrow some milk from her until you can tide the baby over the most critical period. I

*Read before the Seventh District Medical Society at Shelby, N. C., October 8, 1917.

think it best to try and secure a relative, if one can be found anywhere within the connection, as they will usually be more willing to make sacrifices and will not be quite so over modest in granting this privilege.

IRITIS.*

By J. G. Johnston, M. D., Charlotte, N. C.

Inflammation of the iris is a disease of paramount importance to both specialist and general practitioner. To the specialist, because it comes in his own particular line of work, and it behooves him to be able to handle it in the best possible manner. To the general practitioner, because a great many of these cases are seen by the general practitioner first, and some of them are treated by him all the way through. For as much then, as eye sight restored to normal or permanent blindness is the result of the correct diagnosis and treatment of these cases, I hope that I may not be tiresome and that you will bear with me for a few minutes.

The iris is a colored membrane or curtain, circular in form, hanging behind the cornea, immediately in front of the lens, and perforated in its center by an aperture o fvariable size—the pupil. It serves to regulate the amount of light admitted to the interior of the eye and cuts off the marginal rays, which would interfere with the sharpness of the retinal image.

Iritis-inflammation of this circular membrane, is practically always a local manifestation of a general disease. It may be classed as acute or chronic, primary or secondary (although practically every primary iritis is due to some general disease), idiopathic or traumatic. Finally they may be classified as congenital or acquired. The idiopathic cases, though classed as such, practically do not exist, as every case of iritis is bound to have a cause. For practical purposes the varieties simmer down to three, acute, chronic, and traumatic—the traumatic cases will not be here considered.

One of the first things to attract our attention in a case of iritis is pain, usually worse at night and accompanied by photophobia with decrease of vision and lachrymation. Along with these you find redness of the eye, especially in the cornea-sceral region, and sluggishness or immobility of the iris. The pupil is contracted, the iris has a muddy appearance with changes in its color, thickness and form. Almost invariably the pupil loses its jetblack color, owing to the turbidity of the aqueous humor. The pupil fails to dilate when the eye is placed in the shadow. In the normal eye when covered or shaded so that the pupil is in the shadow, the pupil will dilate if the fellow eye is covered. This failure to dilate is present early in the disease, and if allowed to run for a few days without treatment the iris becomes bound down to the lens capsule. This is shown on resorting to the use of a mydriatic in order to dilate the pupil, and is characterized by a dark deposit or sheds of pigment left on the anterior surface of the lens capsule, when the iris is torn loose from its adhesions. These adhesions may be too strong to be broken up or they may break up at some parts of the pupil but not at others. Where the adhesions break up the pupil dilates, thus giving you an irregular pupil which is an absolute sign of iritis, either acute or chronic or at some past time. There is practically always some tenderness of the eyeball due to the associated cyclitis. The iris and ciliary body having the same blood supply you generally have an inflammation of both when either one or the other is attacked. Pain in iritis is in the eye itself or it may be referred to the temple or the suproorbital region, although it may be referred anywhere around the orbit or to the side of the nose. In those cases of iritis where the aqueous humor becomes turbid or considerable exudation is deposited in the pupil the loss of vision is marked. I have repeatedly seen these cases where the eye was almost completely blind, the patient not being able to count fingers, yet under proper treatment his vision be normal when the inflammation had been cured.

The tension of the eyeball is usually normal but may be increased. The anterior chamber of the eyeball may be deeper, although this is more of a comparative than an absolute fact. In all cases of iritis accompanied by cyclitis there are numerous deposits on Descemet's membrane. In cases of purulent infection you generally have a deposit in the lower part of the anterior chamber known as hypopyon, while if there is any hemorrhagic tendency in the patient this deposit in the anterior chamber will be composed of blood cells and known as hyphema.

First and foremost among the complications of iritis is cyclitis. In fact it is doubtful whether any severe case of iri-

*Read before the Seventh District Medical Society at Shelby, N. C., October 8, 1917.

tis is free from thi scomplication. This is shown by the redness being more intense at the cornea-scleral junction, and more so by the tenderness of the eyeball on pressure. Since both iris and ciliary body have the same blood supply and when the pupil is dilated in the treatment of iritis, more blood is forced back into the ciliary body making it necessary at times to replace your mydriatic by a myotic which contracts the pupil and makes more certain the second complication, viz., adhesion of the iris to the lens capsule. This occurs very easily as the iris lies naturally against the anterior surface of the lens and when inflamed attaches itself to it with great readiness. If your pupil is dilated promptly and fully, no great harm is done, a few pigment spots left on the capsule, but these do no great amount of damage; however if the pupil is not dilated promptly and fully the adhesions become stronger and the attachment permanent. This then prevents the escape of aqueous from the posterior to the anterior chamber by way of the pupil, and in the course of time leads to another complication which eventually, unless corrected, ends in blindness—I refer to glaucoma. The secretion of the aqueous humor is going on steadily all the time, but as it escapes from the anterior chamber and the complete adhesion of the iris to the lens, blocking all transfer of the fluid from the posterior to the anterior chamber ,results in over distension of the eyeball, and increase in pressure. These three complications have been natural outgrowths of the disease, one following upon the heels of the other, so to speak. The next to which I wish to refer does not follow as did the others, but is more common than glaucoma. This is hypopyon—a collection of pus in the anterior chamber in front of the iris. Following the laws of gravity this pus will generally be found in the lowest part. Usually nature, the system, is able to take care of this pus under proper treatment, but times will come when it becomes necessary to give some assistance.. This is best done, by a straight incision with a keratome into the anterior chamber and with a syringe wash out the pus. On one occasion I aspirated the anterior chamber under anesthesia, clearing the pus out in that way and got good results. At another time I saw the anterior chamber opened and the semi-organized hypopyon removed with a forcep, with fairly good results, I mean by that with some sight. The eye, however, which has pus in it that the eye itself cannot take care of, is so desperately near the point of destruction, that you are probably justified in trying anything that gives promise of saving it. The last complication of which I wish to speak is occlusion of the pupil, from thick albuminous fluid, coagulated fibrin, or pus corpuscles. These if left alone become more or less organized into fibrous tissue and of course lead to blindness, but under prompt and active treatment they often clear up entirely.

The diagnosis is really a very important part in the management of the disease, due to the fact that wrong treatment often results in complete loss of sight. Practically always this incorrect treatment is due to a faulty diagnosis, and I have endeavored to make the diagnosis as plain as possible, in order to assist in guarding against such errors. The two most important disease to be differentiated from being conjunctivitis and glaucoma, I have put the differentiating symptoms of each opposite in parallel lines:

Conjunctivitis.	Iritis.
Free discharge, usually.	No discharge unless complicated with conjunctivitis.
Greatest redness on posterior part of eyeball.	Greatest redness at cornea-scleral margin.
Adrenalin clears eye readily.	Adrenalin does not clear eye readily.
Conjunctival vessels show up separately and are plainly seen.	Diffuse general red color.
Pupil responds to light.	Pupil contracted, does not respond to light.
Vision not affected.	Vision affected.
Tension normal.	Tension normal until late when may sometimes be increased.
Color of iris normal.	Color of iris changed, has muddy appearance.

Conjunctivitis.	Iritis.
Pupil dilates regularly under a mydriatic.	Pupil dilates regularly, irregularly, or not at all.
No tenderness on pressure.	Tenderness on pressure.
Uranine—pupil remains black for several hours.	Uranine—pupil gives varied green hues in 20 to 30 minutes.
Eye is uncomfortable.	Eye usually distinctly painful.
Eye sensitive to light.	Sensitiveness to light more marked, really painful.
Iritis.	**Glaucoma.**
Pupil contracted.	Pupil dilated.
Patient usually under 45 years.	Patient usually over 45 years.
Tension normal except late in the disease, when it may be increased.	Tension increased.
Anterior chamber of normal depth except in cases with annular synechia, then deeper than normal.	Anterior chamber shallow.
Cornea sensitive to touch.	Cornea anesthetic.
Ophthalmoscope can not be used satisfactorily.	Ophthalmoscope shows excavation of nerve head, and pulsation of retinal arteries.
Chief causes, trauma, syphilis, gonorrhoea, tuberculosis, rheumatism and diabetes.	Chief causes, blocking of iris angle, trauma, intra-ocular growths, changes in blood vess.
Refraction has no bearing.	Refraction hyperopic, generally.

The differential diagnosis between iritis and cyclitis is sometimes almost impossible to make, but as both are to be treated alike, at first anyway, we will not take your time to go into this.

The discussion of the causes if iritis has been purposely left until this time, because the treatment is so closely related to the cause, that it seems well to keep them in mind together. Syphilis is said to be the cause of 50 per cent. of the cases of iritis. The remaining 50 per cent must be divided among rheumatism, gonorrhoea, gout, tuberculosis, diabetes, and other infectious diseases. A certain percentage must also be attributed to diseases of the teeth and tonsils.

Treatment embodies three important things, backed by others of equal importance, but not the same probably, for each case. These three are: Keep the pupil dilated; combat pain in the eye; keep a sharp lookout for an increase of tension of the eye. It is also very important to treat the general disease responsible for the condition. One important thing in the treatment of iritis is keeping the eye quiet and the patient at rest. Rest in bed is very essential if the case is serious. The diet is also important, no highly seasoned food or stimulating drinks being permissible. The treatment of the general disease responsible for the iritis is one of the most important things in connection with the treatment. If syphilis be responsible for it, the treatment should include salvarsan in conjunction with mercury and iodide of potash. If rheumatism be present the salicylates should be pushed to effect. Diabetes, gout, etc., if present should receive appropriate treatment. It need hardly be added that the bowels should be kept open, usually by means of salines, but at times when every thing gets to a standstill, so to speak, the eye red, pain hard to combat, etc., a thorough purgation by means of calomel will often work wonders.

Keeping the pupil dilated in order to prevent adhesions of iris to the lens is best done by installation of atropine in sufficient strength of solution and sufficient frequency to keep a full dilation of the pupil. This atropine may be put in solution in oil if for any reason an aqueous solution is undesirable. The oily solution is probably not so active as the aqueous, but does not escape from the eye as readily so on the whole, the effect is about as good. The really important thing to be on the lookout for, in the use of atropine, is to be sure there is no tendency to increase of tension. If one is doubtful about that it is best to instill a few drops of cocaine and watch the pu-

pil for awhile. If no dilatation occurs and one is still suspicious, homatropine may be instilled, and the effect watched. If with either of these the pupil dilates widely, rapidly and pain is produced in the eyeball by their use, a drop or two of a 1 or 2 per cent. solution of eserine will contract the pupil again, and very probably prevent a glaucomatous attack. Sometimes atropine is used to such an extent to combat the iritis of corneal ulcer, etc., of old people that the tension is increased and the sight of the eye destroyed. Thus we see that while keeping the pupil dilated is the first essential in the treatment of iritis, there are times when it is far preferable to risk the adhesions of the iris to the lens capsule, than to go forward into dangers fully as serious and more certain. If at any time during the course of the disease the eye becomes painful and the tension is increased, one must take his choice of using a myotic to contract the pupil and run the risk of iritic adhesions or he may do a paracentesis of the eyeball. If the case is urgent you would probably have to do a parecentesis in addition to the use of a myotic in the effort to reduce the tension and save the sight. The problem of keeping the eye free from pain is one that at times tries the resourcefulness of the oculist, and should include not only analgesics but also means of allaying inflammation. Aspirin in from 5 to 20 grain doses 3 or 4 times a day may be sufficient; at other times the same doses in combination with codeine is necessary. Others may require the hypodermic administration of morphine, but this is not resorted to unless absolutely necessary, as it tends to contract the pupil as well as lock up all secretions and when the effect dies out leaves the eye more painful. The pain usually coming on worse at night may sometimes be relieved by a hot foot bath for probably a half hour, the water being kept hot by the addition of hot water from time to time.

Sometimes in the severely congested cases a small blister on the temple, or perhaps better two or three leeches may be applied to the temple of the affected side. Often when these have depleted the parts of blood the eye gets easy, the pupil, which has not responded to the action of atropine, dilates and the patient has a feeling of general well being. Hot applications play an important part in keeping the eye free from pain. I am aware that many people prefer ice to hot applications and I think ice has an important part to play, but believe that part is in the beginning of the inflammation. I cannot forget the vigor with which one of my teachers used to hold forth on this subject, saying that "with hot applications you could do no harm and might do a great deal of good, while with ice you might do some good but you also might do a great deal of harm."

I do not feel that I can leave the subject of relief of pain or inflammation without saying a few words, at least, concerning subconjunctival injections. I do not believe we have an agent as potent in the relief of pain in selected cases as these. I remember well one case—a young man with severe iritis of I thought rheumatic origin, who had suffered for some time and was suffering keenly despite the fact that I had loaded him up on aspirin to the limit. Almost in desperation I decided to inject a solution of sodium salicylate under the conjunctiva. He felt much better after the first injection, and after a second one, two days later, he had no more pain, and his eye rapidly recovered from the attack. You may say that he was just ready to recover anyway; that may be true, but from this and from the results of subconjunctival injections many times since then I have great confidence in them. Installation of a few drops of a cocain solution into the eye before the injection makes it much more pleasant for the patient and for the doctor as well. It is said that subconjunctival injections of guaiacol are almost a specific for tubercular iritis, and I know from a considerable experience that subconjunctival injections of cyanide of mercury fills a place in the treatment of the diseases of the iris and ciliary body, that I frankly admit I would not know well how to dispense with.

TUBERCULOSIS OF THE EYE AND EAR.*

By R. W. Petrie, M. D., Charlotte, N. C.

In trying to get up a paper on tuberculosis of the eye and ear, I find the literature somewhat limited, especially with reference to the eye; and as it is rather a rare disease, compared with some other eye diseases it is somewhat difficult to get up very much information on the subject. However I have succeeded in collecting a few points that may be of some interest. As tuberculosis of the eye is

*Read before the Seventh District Medical Society at Shelby, N. C., October 8, 1917.

a rare condition it may be easily overlooked if we are not on guard.

We have tuberculosis occurring in any and all parts of the eye. Except in the conjunctiva, and possibly in the cornea, it is secondary to tuberculosis of the lungs or of some other part of the body. In the conjunctiva it occurs primarily as a rule, and manifests itself as an ulcer. It is usually situated under the upper lid and is covered with grayish-red or yellowish-red granulations. Surrounding the ulcer may be seen grayish nodules or tubercles. The ulcer occurs only in one eye and it is painless.

The infection usually enters the eye with a particle of dust or some foreign body, the sharp angles of which abrade the tissues and upon the raw surface the tubercle bacillus is deposited and gets in its work. The ulcer is slow to heal and becomes chronic, it may last for several months, or possibly over a period of several years. Often after an apparent cure you may be disappointed in having it to reoccur, extend to the cornea and to other parts of the eye, and finally lead to the patient's death from tuberculosis of some other part of the anatomy.

The treatment of the ulcer is to completely remove by curetment all the diseased parts and cauterize the raw surface. The administration of tuberculin with the proper sanitary surroundings, nutritious diet, tonics, etc., should be given.

The cornea may be infected in the same way as the conjunctiva, and occur primarily; but as a rule it is secondary to tuberculosis of the uveal tract, conjunctiva or sclera. All other tubercular eye conditions are secondary.

Tubercular iritis may be produced primarily by injecting tuberculous material into the anterior chamber. This has been done for experimental purposes and produced the tubercular iritis; but as a rule it is a secondary condition.

Then tuberculosis of the sclera, choroid, iris, lachrymal gland, lachrymal sac, opic nerve, orbit and lids is secondary tuberculosis. In all these conditions it is hard to get satisfactory results from your treatment, as the patient is always in a run down condition, possibly in the last stages of consumption; at least the vitality is far below par; and therefore your treatment is of little value.

The disease usually destroys the eye, the brain and meninges become involved, and the patient dies from tubercular meningitis, or from general tuberculosis. The treatment is that of general tuberculosis.

I wish to quote from an article in the Annals of Opthalmology, April issue, by Dr. Hiram Woods, of aBltimore, what his experience with tuberculin has been, as regards the diagnostic value and therapeutic action of tuberculin in ocular tuberculosis—or tubercular uveitis. He says: "Reporting three cases in which tuberculin was used, that in one parmanent damage to vision was done by the use of tuberculin for diagnostic purposes; second, that rapid extension of chorcidal exudate followed the injection of tuberculin; in another there was an apparent cure from the therapeutic use of tuberculin. He advises strongly against the use of tuberculin so long as it is in the acute, or in the advancing stage. But where it is in the chronic or non-progressive stage tuberculin in small doses and increasing the dose to a point less a focal reaction tuberculin should be given.

He sums up the following: "First, avoidance of focal reaction in interocular lesions.

"Second, avoidance of tuberculin as a therapeutic measure in acute cases.

"Third, tuberculin is indicated when the trouble is non-progressive, but does not get well.

"Fourth, a positive von-Pirquet with elimination of other causes, is sufficient basis for the use of tuberculin in therapeutic doses.

"Fifth, the present status of vaccine therapy is so uncertain, in the opinion of even those most expert and experienced, that ophthalmologists owe it to their patients to conduct this treatment under the guidance of one trained in "immunologic problems."

Tuberculosis of the ear is not so rare as tuberculosis of the eye. It is claimed by good authorities that 65 per cent. of all discharging ears in children are tubercular. While this may be a high percentage, it is a fact that a large per cent. of these cases are tubercular. This is a disease, that in many instances is overlooked. I mean so far as a proper diagnosis is concerned as well as the treatment. We treat the case ordinarily as we do any ordinary discharging ear and never lok into the case as we should to ascertain the true cause of the trouble. This is true with the general practitioner as well as with the specialist. If we examined our cases more thoroughly, if we would go into the family history, as well as a thorough history of the present illness, make more microscopical examinations and cultures, we would find more tubercular ears than we now do. The laity comes in for a certain amount of

criticism also. The child has a discharging ear, the mother pays little or no attention to it, and when you question her about it, she says, oh, that does not amount to anything, the child is not sick, the ears will soon stop discharging and it will be alright. As a result of this the doctor is not consulted until possibly a great deal of damage has been done.

Tuberculosis occurs in both the acute and the chronic forms. In the acute form, except in children, it is secondary to tuberculosis of the lungs. It most generally finds its way to the middle ear by way of the eustachian tube, but possibly in miliary tuberculosis it is through the blood channels. It almost invariably occurs bilaterally.

In children aural tuberculosis may occur in an apparently healthy child, and without evidence of tuberculosis elsewhere. The abscess develops and perforation takes place without pain. Ordinarily the first the mother notices that anything is wrong with the child is that it has discharging ears. This I wish to emphasize. There is no pain, the child is not sick, and for this reason the mother thinks nothing is wrong with the child. This is different from otitis media due to other causes, like for instance infection of the middle ear from scarlet fever, or from influenza; in which you always have more or less pain, elevation of temperature, possibly nausea and vomiting; in other words you have a sick child for several days preceding the discharge, as well as the history of an attack of some infectious disease possibly several weeks before. This is not true of tubercular otitis media as a rule.

Our best authorities say that a perforation of the drum membrane occurring without pain means tuberculosis of the ear, especially where there are multiple perforations.

The perforation of the drum membrane is followed by a discharge that soon becomes offensive, the odor of which if not diagnostic is at least suggestive of tuberculosis of the ear and should call for a microscopical examination..

The involvement of the soft tissues is rapidly followed by necrosis of the bony processes, may extend to the mastoid, carotid canals and laborynth with complete destruction of the same.

In no other form of otitis media is complete deafness so liable to occur. This I think is due to the fact that the disease is often unrecognized as being tubercular, the treatment is neglected or none at all given, and as a result of this the rapid destruction of the tissues soon destroy the hearing.

I do not mean that no other middle ear infection will destroy the hearing, but as so many of these cases are tubercular, and so much damage may be done in so short a time, I think it advisable to ascertain the true cause of the trouble. A chronic discharge from the ear in a tubercular individual, with rapid destruction of the membrane tympani, with double or multiple, perforations, occurring without pain—or if in a child whether or not in a tubercular individual where you have large exposed areas of necrotic bone, are strong suggestions at least, and in most cases means tuberculosis of the ear. The finding of the tubercle bacillus i nthe discharges, or the inoculation of the guinea pig of course makes the diagnosis positive.

The disease is rarely cured where it is secondary to tuberculosis of the lungs. Tubercular meningitis, brain abscess, or sinus thrombosis may occur, and the death of the patient is the result.

The external canal should be cleansed at frequent intervals with a saturated boric acid solution or normal saline solution; the discharges should all be wiped away in order to establish good drainage, all granulations cureted out and necrotic bone removed.

In acute cases where the mastoid is involved, a radical mastoid should be done if the condition of the patient permits it. In advanced cases the operation should not be done as you may hasten the d_ath of your patient. In acute tubercular mastoiditis in children, where it is a primary condition, a radical mastoid is proper and the child usually recovers. In chronic tubercular mastoiditis the prognosis is bad.

In conclusion, I wish to report two cases that have come under my observation that I think are typical cases of tuberculosis of the ear.

The first is a case that came to me several years ago while I was doing general practice. The mother consulted me about the child on account of some other ailment. The patient was a boy of about six years of age. In going over the child I noticed an offensive discharge from both ears. On inquiry the mother told me the ears had been discharging all the child's life, and that it had never given him any trouble and did not amount to any thing. She would not even consider having them treated. The last information I had from this case wa sabout two years ago. Some time previous to that

time the young man had had an attack of meningitis and was then confined in an insane asylum.

Second case is that of a boy three and one half years old, was brought to me on May 15th, 1917, because he had become deaf. The history I got was that the child until the 15th month was healthy and robust, had never been sick, was apparently healthier than any of the other seven children in the family. At that time the mother noticed a discharge from both ears, but as the child did not appear sick she paid no attention to the ears thinking they would come around all right, as she had known other children in the neighborhood to have the same kind of trouble ,and without treatment it had not amounted to anything. On examination I found hypertrophied tonsils, the post nasal region was entirely filled with adenoids, and a very offensive discharge from the ears.

The child appeared deaf and dumb so far as I could ascertain. The mother stated that the child could hear a little until about four months ago; but since that time it could not hear at all and had stopped talking. I think this is the reason she decided to have it treated.

The tonsils and adenoids were removed; and while under the anesthetic I examined the ears carefully and found a complete destruction of the soft tissues with possibly some little necrosis of the bone. There was no sign of the drum-membrane or the ossicles; only the bony walls of the external canals could be seen.

No microscopical examination was made in either of these cases but the clinical symptoms are typical of tuberculosis of the ear.

ABDOMINAL REFLEX IRRITATION.*

By O. J. Houser, M. D., Charlotte, N. C.

Notwithstanding the great advance in every department of medicine, there are many maladies, which theoretically should be easy of relief, which baffle our most skillful efforts, and give to the patient untold sufferings.

One of the most conspicuous of these is the lower abdominal reflex irritation in women, so commonly seen, so distressing to the patient, and so perplexing and harrassing to the doctor.

A malady too, which from its persistancy, works havoc on the nervous system of the patient, very often causing hysterical or neuristhenic attacks, at which time the doctor is called in, and his whole sole aim is to get the patient at east, from this time the doctor is never consulted again until another attack, thus the seat of the trouble is very often not diagnosed.

In the male the range of causation is somewhat narrow, being restricted almost entirely to chronic appendicitis, renal stones, gall stones, semivesculitis, hernias, acid or alkaline excretions from the kidney, hemorrhoids, fissure, constipation or dietetic causes.

To ascertain the cause in order to remove it, is often a task of great difficulty, and one which causes much mental anxiety and worry.

The paucity of satisfactory literature treating of these complications increases our responsibility, and necessitates closer observation, and taxes our resourcefulness in applying efficient remedies.

In investigating these complications, we should be careful to remember the anatomical relations of the organs in the lower abdomen and pelvis.

Some of the most distressing cases are found at the climacteric; some local irritation acting on the nervous system; often the physic factor keeping up the trouble after the local conditions have been entirely cured. In old age there is a tendency to sagging of the bladder at its inferior fundus because of atrophy of the pelvic organs, causing residual urine, this urine undergoing ammonical change causes vesical pain, which is very trying on the nervous system, owing to the nervous supply of the trygonium of the bladder being derived from the lumbar portion of the spinal cord, which is closely conected with the sympathetic nervous system.

Where many children have been born, and there is great relaxation of the abdominal walls ,the weight of the gravid uterus in the later months of pregnancy causes great discomfort. This is a common experience; which may be relieved by a nicely adjusted abdominal binder or corset.

Lesions of the endometrium, fibroids, cervical and perineal lacerations play a great part in giving abdominal reflex irritation, the treatment of these you well know is surgical.

We have another class of cases which are emotional, these subjects are women who are run down in health, or in school girls in whom the nervous system has

*Read before the Seventh District Medical Society at Shelby, N. C., October 8, 1917.

been overtaxed by close application, and they have become chlorotic and hysterical; or women suffering from sectual neuristhenia, the result of the abuse of sectual relations.

Now these two classes of cases referred to are of striking contrast and require very different modes of treatment. In the first, we can make no mistake by making a thorough examination of the pelvic organs at the start; the second class mentioned is very unsatisfactory to treat.

A summary of the most important causes of abdominal reflex irritation may be classified as follows: In the male the first and most important is as mentioned, chronic appendicitis, renal or gallstones, semivesculitis, which is so often caused from a gonorreal infection. Lastly, internal hemorrhoids or polipi.

In the female we have to consider chronic endometritis, subinvoluted wombs, fibroids, cervical or perineal lacerations and salpingitis. The term salpingitis includes all the changes that take place in the fallopin tubes as the results of infection, and I will say right here that 50 per cent of the salpingectomys, ophrectomys, and pan hysterectomys are caused from a gonorrheal infection. Prolapse uteri will cause a great deal of discomfort in the pelvis and lower abdomen. Both recticele and cystocele are frequently mistaken by patients for prolapse of the uterus. Any of the operations adopted for the repair of the perineum will give good results in the treatment of rectocele. The womb may be displaced. Back (retroflexed or retroversed); forward, (antiflexed or anteversed), or may be displaced laterally.

Dysmenorrhea, which may be caused by endometritis, displacements of the uterus, salpingitis, cervical stenoses, uterine fibroids, or diseased and prolapsed ovaries).

Vericocele of the broad ligaments; this very often gives increased menstrual flow, dull pelvic pain, which is exaggerated by standing or walking. There is a tendency to postpartem hemorrhage in these cases.

I will not try to go into the treatments of the foregoing conditions, owing to my time being limited on this paper.

CRETINISM.*

By E. B. Lattimore, M. D., Shelby, N. C.

Many diseases that were incurable fifty and a hundred years ago are incurable today. We often hear of sure cures for tuberculosis, nephritis, cancer, etc., but when we try the remedies, we find that there is nothing in them and our patients die as of old. In cretinism we have a disease which was little understood and with no successful treatment until a few years ago. But modern medicine has given us a remedy which will cure or at least ameliorate the symptoms.

Nowadays, instead of considering the cretin a hopeless case, the outlook for him is bright. Prior to the discovery of the cause of disease, cretinism was looked upon simply as a low form of idiocy or defective mental development, dependent upon local causes, associated with deformity or arrested growth.

Since my experience with the disease has been limited and my observation of each case of short duration, I shall not discuss it in text-book style, but merely give the symptoms as I have found them.

As for the cause, suffice it to say that there is either an absence atrophy or maldevelopment of the thyroid gland. But we are still in the dark as to the cause of the thyroid disturbance.

Numerous causes have been given as to possible factors, chiefly alcoholism, syphilis and tuberculosis, but no definite relation can be traced between these and the few cases it has been my privilege to observe. Nor do I believe heredity plays any important part in the cause.

The most prominent symptoms are that the face, neck and other part have a bloated appearance. The nose is widened and flattened, the lips are thick and the tongue usually protruding, giving the child a dull, listless appearance. We also see a thick, scaly skin and the hair looks dry. The child looks much older than he really is. The abdomen is swollen and the back is sometimes arched; the limbs are short and stunted. The fontanelles remain open long beyond the normal term. All the muscles of the body are weak and the child can't support himself on his feet, this unfortunately being the first symptom usually noticed by the parents. The mental condition is as poorly developed as the physical. He sits about and takes no interest in any person or anything and seems to care no more for his parents than for any one else, and frequently seems not to recognize them. He exhibits no desires except for food. If the child atempt to walk, the movements are slow and there is more or less incor-ordination; it is really more of a waddle than a walk. Speech is slow,

*Read before the Seventh District Medical Society at Shelby, N. C., October 8, 1917.

thick and hoarse. He is usually good tempered and does not cry.

As fo rthe diagnosis, cretinism is more commonly mistaken for chronic Bright's Disease than anything else on account of the oedema sometimes present, but as this oedema does not pit and is not affected by gravitation, we can easily exclude Bright's Disease. I might also mention that idiocy can be distinguished from cretinism by the fact that in idiocy the body is usually fully developed physically.

Since we know the cause, the treatment naturally suggests itself, namely, the thyroid extract. The sooner the treatment is instituted, the better the result, for when this condition is neglected the children become worse and worse until finally they are beyond medical aid. For this reason, the value of an early diagnosis in this condition is more important than in any other disease with which we are brought in contact. As I said awhile ago, the first symptoms usually noticed by the parents, is the child's inability to support himself on his feet. Of course the disease has existed a long time before that, and if it could have been seen by a physician, it would have been recognized and treatment begun. Parents are slow to admit even to themselves that a child of theirs is "not right." The benefits derived from the thyroid treatment is not lasting and must be continued throughout life. A child will improve wonderfully while taking it and relapse as soon as it is discontinued. The only preparation I have used is the dessicated thyroid extract in doses from one to five grains according to age.

Before closing, I want to report brefly two cases. The first was a child eight months old, brought to me from the upper part of the county and had nearer all the symptoms than any case that I have ever seen. I put him on thyroid and had him brought bac kevery two weeks. In a very short time improvement was noticeable, and at the end of two months, he scarcely looked like the same child. At this time the father took him to a surgeon who was then in the zenith of his glory and he made a diagnosis of syphilis, put him on large doses of iodide of potassium, and the child died promptly. The father explained to me afterwards that he thought that if I could help him the surgeon could cure him. The other case I want to mention, was a girl baby born in Shelby during the past summer. I was present when she was born, apparently normal, except that she didn't open her eyes. I saw her no more after she was four or five days old, until she had been carried to Rutherford Hospital six weeks later. Her mother took her there because she had never yet opened her eyes and as she expressed it, didn't seem right. Dr. Biggs examined her and diagnosed the case as cretinism and sent her back to me. I gave her three quarters of a grain of the dessicated thyroid three times a day and on the eighth day she opened her eyes for the first time and kept them open. She also seemed better in other respects. I continued the treatment and she died on the fifteenth day. Whether the treatment caused her to open her eyes or not, I am unable to say, but I do know that the fact has been established by many observations that the thyroid gland contains some substance, which, administered to cretins exerts a curative effect. I also know that without this ductless gland, which until a few years ago, was considered useless, we would all be cretins.

Raising Tissue Resistance in Winter.

As a means of lessening susceptibility to bronchial and pulmonary infections during the winter months, cod liver oil in the form of Cord. Ext. Ol. Morrhuae Comp. (Hagee) is of the highest value.

It does this by increasing the resistance of the bronchial and pulmonary mucous membranes so that susceptibility to microbic invasion is greatly reduced. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is indicated in every case in which this susceptibility exists. It is of particular value in young children and elderly persons of reduced vitality. Owing to its palatability Cord. Ext. Ol. Morrhuae Comp. (Hagee) may be given over long periods without causing nausea or intolerance.

"We think that all who have made a test of the action of Tongaline, either in the acute stage of grippe, or in the period of convalescence marked by an extreme nervous disturbance so often present, will be convinced that the remedy has a direct and marked influence for good.

There is not an organ or function of the body which may not be impaired or affected by grippe as to lead to a permanent disability, but on account of the extraordinary eliminative action of Tongaline, this rarely occurs if that remedy is used, since there is then no opportunity for such an accumulation of the poison as to induce permanent harm."

Peptone Injections in Septicopyemia.—Potel (Presse Medicale) reports the case of a man wounded in the shoulder in whom, in spite of several operations and prolonged Carrel treatment, a septicopyemia developed. The latter proved refractory to various measures, including the Leclainche and Vallee serum and sea water injections. Blood cultures revealed a streptococcic infection. The patient soon passing into a cachectic state, Potel administered peptone injections, as recommended by Depage and Nolf, with the result that after the twelfth injection—ten c. c. being given on alternate days—fever completely subsided and the patient was on the way to recovery. In this treatment bacteriological peptone is used; it should be odorless and as pure as possible. A ten per cent. solution in sterilized water is made and heated to 120 deg. C. A flocculent precipitate forms, and is filtered off on a hot filter. The solution remaining is put up in ten c. c. ampoules which are sterilized again in the autoclave. Subcutaneous injections of the solution are safe if one makes sure the needle has not entered a vessel. For the first injection the solution should be diluted. If it is well borne, ten c. c. of the ten per cent. solution may be given in the second injection. Intravenous injections, if employed, should be administered very slowly, in three to five minutes, with the patient's pulse and face under careful observation. If facial congestion and a sensation of oppression supervene the injection should be stopped at once and five c. c. of camphorated oil injected, after which gradual recovery will take place.

The Vaginal Plug.—Tweedy, in The London Lancet, says that the proper use of the vaginal plug for the control of ante partum hemorrhage. The failurse which its use has met in the hands of many others are due to the improper method of application. The plug should be inserted as follows: The left hand should be passed into the vagina with the palm facing the sacrum and the tips of the fingers behind the cervix. Pieces of cotton wool the size of the thumb knuckle wrung out of lysol solution, should be inserted into the cervix with the right hand while the fingers of the left are squeezing the pledgets into a solid mass and making room for more. This procotton. A T binder should then be applied and a firm abdominal binder put on and wastened tightly from above downward. Such a plug will at once arrest the hemorrhage, which it accomplishes by compressing the uterine vessels between its mass and the uterus. The plug has the disadvantages of not being easy to apply and of causing some pain and shock and often some superficial lacerations of the vaginal mucosa.

Functional Tests in Chronic Nephrites.—Christian discusses in the International Clinics the various tests to determine the functional capacity of the kidney, normally the phthalien output, blood, urea, nitrogen, index of urea, excretion and specific gravity of urine.

The last mentioned is a simple means of determining the functional capacity of the kidney. The kidney normally accommodates itself to different kinds of urea complexes by excreting a more or less concentrated urine, a urine which pretty closely parallels the fluid intake. If, however, the kidney is injured it does not accommodate itself so well and does not accommodate itself so promptly so that surves representing the specific gravity taken every two hours instead of showing marked variations flatten out in proportion as the kidney is diseased.

Christian believes that the functional tests are useful in determining prognosis, and, to a certain extent treatment, and in some cases diagnosis, when there is a question of early nephritis, but they are mainly helpful from the point of view of prognosis.

Action of Poison Gases on the Eye.—Teulieres and Valois have seen many examples of injury to the eyes from deleterious gases in the Ophthalmic Center of the XIII Region. The subjective symptoms agree throughout with those produced by the introduction of active irritants in the conjunctival sac—prickling, lacrymation, blepharospasm, and photophobia. These are sufficient to bring about subjectively diminished vision, irrespective of the state of the fundi. Dyschromatopsia, contracted visual field, and scotomata were never noted. Objectively there is a severe conjunctivitis of the dry type with slight chemosis and at times swelling of the lids. The pupil as a rule is sluggish. There are evidences in the worst cases of neuroretinitis. The outline of the papilla is partly effaced. Vision may be reduced even as high as 80 per cent. Nevertheless the outlook in these cases is favorable.—La Presse Medicale.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

LOOKING BACK.

Galileo attacked the Polmemic system of the heavens; and Bacon the dialectics of Aristotle. Obloquy and proscription have ever assailed all great discoveries and apparent innovations. It has ever been one of the most unseemly traits of the human character! Pride and selfishness lie at the bottom of all hostility. Envy and jealousy prompt such antagonism. Progress is opposed by the non-progressives. It presumes that all is known that can be.

Great minds have always seized upon opportunities, and have made them for themselves.

Alexander forced the Pythian priestess on the Tripod, on a forbidden day; and the Pythian exclaimed, "My son, thou art invincible."

It was neither to the witty and polished Greek, nor to the grave and stately Roman, are we indebted for dyes for clothes and metals, but to nations denominated barbarous.

Europe may glory in her discoveries, but the art of printing has been described to persons so obscure, that China claims it. Newton would perhaps never have read the heavens had it not been suggested by some children, in Zealand, playing with the glasses of a spectacle-maker. An obscure monk discovered powder. Had it not been that simple aborigines furnished him with food, Columbus and his followers would have perished, and his expedition proved a failure. It was the fortuitous observation of the colonel of a marching regiment that gave the great Sydenham the idea of bleeding.

To promote health of body and tranquility of mind, the sages of antiquity labored with the most severe and incessant toil. They studied the constitution of man, that they might find out the seat of his maladies and the sources of his misery. To assuage the sorrows of the heart, and lift the load from melancholic minds; to restore a desponding spirit to elasticity and vigor, they exhausted all the powers of reason, and all the arguments and arts of their philosophy. Sometimes they failed, but more often they succeeded. The Greeks were more successful in treating diseased bodies than they were in treating mental ills. Athens was rescued from the plague by a single man—Hyppocrates. Harvey was hounded through Europe for demonstrating the circulation of the blood, but he denied there was a thoracic duct. Dr. Rush bewailed the defects of medical science, and consoled himself with the hope that the day would come when all diseases would be banished, and that death would only come to old age. Great men are not always wise.

Plato's philosophy would do for the creed of Christian Scientists! He claimed that "light was the shadow of Deity, and truth his soul." He says the wise and good, as they approximated the source of glory and intelligence were clothed and animated by that heavenly essence which he poured out from the fountain of his eternal being; that into the cup mixed for the formation of man, he poured a portion of his own divinity. Bias, another ancient philosopher, said: "I carry with me all my possessions, of which neither fate, nor foe, nor death, rob me." He considered everything else as nothing. He rivals "Life-for-ever" Jones!

Sanitary science and hygienic laws were famous in the days of Moses, which he learned from the Egyptians. Specialists were known among the Egyptians.

The first time physicians were appointed for the army, was by the great Cyrus; and Sambyses, his son, continued the policy. Ever since, surgeons are provided for the army. Cyrus also kept eminent physicians about his court. The President of the United States also has his personal physician at the White House. Alexander the Great appointed Phillip as his physician. Menecrates was physician to Seleucus. Democedes was a great Persian physician, and ministered to Darius. There were great and successful physicians in remote times; and, according to history, were remarkably skilled for that early period. They were great, even before their times.

From a vigorous infancy the science of medicine has grown to a stalwart period. It is so today. Some wonderful men were the founders of the science; such as Galen, Sydenham, Celsus, Paracelsus, Cullen, Varcolus, Harvey, Bartholin, Boerhave, and numerous others. All were eminent. Let the present-day physicians emulate their studious and painstaking quest for knowledge. F.

THE DOCTOR'S CONTRIBUTION.

In this world's war, your service is absolutely essential.

The medical officer bears the same relative position in war as in peace in that he is a conservator of health and life.

Through his skill, thousands of men receiving slight casualties, are returned to the fighting force, thus conserving the physical strength of the army.

In base, field and evacuation hospitals, doctors are as essential as in civil institutions, where the sick and injured are cared for.

As regimental surgeons and on transports and in the Sanitary Corps, must the Government have doctors if we are to terminate this war successfully.

Your contribution to your country at this critical time is your service which you can give for the period of the war as an officer in the Medical Reserve Corps. That your country needs you, is best answered in that she is calling you now.

The fighting forces are constantly expanding and such expansion calls for additional doctors and even with the troops now in training and under mobilization (about two million) the Surgeon General has not enough doctors to fill the requirements.

Secure an application blank at once; fill it out and present it to your nearest Examining Board. Do not live to regret that you did not have a part in your country's great struggle for democracy which means Liberty.

SENTENTIOUS.

When a doctor gets the "drugless" microbe in his system, he should take down his shingle.

A slow doctor never gets anywhere.

It is the doctor and not the location, which insures success.

Good habits and good morals are a physician's "sine qua non." Bad habits put a period to the brightest prospects.

Many start well; but some fail.

The breath of booze will blow away business.

A good character beats pelf.

It is still true that "an honest man is the noblest work of God."

Some rob "Uncle Sam" who wouldn't pick a pocket!

Some professed Christians "rob God" by keeping what He gives them. .

Character built upon the sands of questionable acts will be wrecked.

A vacillating course is a losing one.

There are men who are the impersonation of procrastination, not dependable.

Keep your word, and you will inspire confidence.

Silence is golden, but a rattle-brained man is a pest.

Earn what a good conscience approves; extortion is short-lived.

Keep a discreet tongue in your mouth; and keep your foot out of it.

Good counsel is well meant, but too often fruitless.

Friendliness makes friends; but a cynic freezes us.

Generosity is a fine trait, but selfishness is abominable.

A bibulous doctor will swallow his reputation.

A well-kept office is a mine of wealth; drug-store loafing is costly.

If you are not busy—read!

Don't talk your business on the street corner; attend it in your office.

A quiet hearer is better than a noisy talker.

A "bay-window" looks well; but it is not always an evidence of brains.

There are powerful intellects in weak bodies; avoirdupois is avoirdupois.

A tale-bearer is no better than a tail-bearer.

A good name is one's richest asset. In the language of Shakespeare, "Who steals my purse steals trash; 'twas mine, 'tis his; but he who filches from me my good name, takes that which enriches him not, but leaves me poor indeed."

FIELD.

DANGERS OF CITIES.

The demands of civilization, and the genius of the age, have made transportation from center of circumference of this teeming, facile, and rapid age beyond the most sanguine speculations of the early settlers. The constant flux and reflux of people, animals, and things, through these channels, make the introduction of portable diseases; sooner or later, almost as certain as the succession of the seasons.

But the increase of population, and the developement of civilization, carry with them the germs of disease; they also develop the study of antidotes, and preventive measures. The knowledge of the laws of prevention, will lengthen the average life of the citizens, and add to the economic value of the same. The knowledge of sanitation is of a compound character largely the knowledge of sanitary laws , is required of the physician. The people know these laws in a general and indefinite way; but very nearly the total of them look to the medical pro-

fession, with more or less confidence to protect the community from disaster springing out of insanitary surroundings, and conditions; and, in threatened epidemics upon the physicians they depend health. It is a Herculean task, if not impossible to get the ditizens in overcrowded tenements in our large cities, who almost of necessity, because of poverty, cannot protect themselves from disease; but such a condition of things, makes such places foci for the generation and dissemination of diseases, which make havoc all around. In smaller communities where sunlight and pure air are so abundant; there would naturally be hygienic conditions, the death-dealing maladies of the large urban communities, are not known. "I will flee unto the hills, from which my strength cometh."

The filth of large cities, and the poisonous sewer gases, with the dirty tenement dwellers, are prolific causes of infections. It would be easy to move Gibraltor, as it would to redeem such plague spots from the wretched conditions so prevalent. The only protection would be a sanitary cordon of isolation, of such places.

The indifferences of the masses, as to the necessity of sanitation is the hardest obstacle to overcome. They are not concerned for themselves, and care nothing for the welfare of others, who would be exposed to danger, because there are those who ignore and disregard sanitary rules and laws. F.

GOD NOT THE AUTHOR.

While scientific knowledge has increased, and civilization has reached a wonderful stage, yet there is still much to be done to prevent many forms of disease, rather than the means of cure. Much has been done, it is true, in extending the average of human life and augmenting the physical powers to resist disease; but much remains to be done.

Men, generally, no longer believe that all disease is brought about by the direct agency of God, and no longer look upon prevention as "blasphemous interference with the will of God." God is the author of good; and man is the author of evil.

The popular mind is overspread by the dark shadow of ignorance, and the belief lingers that diseases are a sort of providential punitive infliction, and cannot be avoided or cured unless in accordance with divine will. Man, and the whole animal—and we may say, vegetable world—are as much the subject of unchangeable law as are the motions of the earth and the planets. God's laws are immutable, and the physiologic law, if obeyed, means health; if disobeyed, means disease and death. There is no interposition of Divine Power about it. God's laws are just and righteous altogether, and man should know them and know himself. It has truly been said: "Birth and death, health and disease, are but parts of the ordinary course of human events; and that the living body is a mechanism, the proper working of which we term health, its disturbances disease, and its stoppage death."

The law governing animal life is just as fixed as the law governing the position of the earth to the sun, and to the waxing, full and waning moon! Disease is to be studied precisely as we study the vital processes of which they are but a part. This knowledge of the right method of study has simplified many of the problems presented by disease. The right working of the human machine depends upon many and complicated conditions. Over some of these we have no control; while others can be modified by our own actions. When the above facts are known and observed, man will become the most healthy, instead of the most sickly of animals.

YOUNG PHYSICIANS, YOUR OPPORTUNITY.

Never again in the history of medicine in this country will such an opportunity be afforded you to serve your country as well as the best interest of yourself.

The experience which you will gain by being commissioned in the Medical Reserve Corps and seeing active service, will be worth more to you in a professional way than you could acquire in years of practice in civil life.

The pay granted to officers in the Medical Reserve Corps is sufficient not only to cover all needs, but enable you to lay aside a comfortable balance, and while the older men in the profession have come forward, it is to the younger men that the greatest benefits accrue.

The experience will prove broadening both professionally and mentally. With this experience and the thought that you have served your country in time of need, you will return to civil life and receive the further benefits from your patients, friend and acquaintances, always accorded to one who has been so prominently individualized as this opportunity will afford you.

EDITORIAL NEWS ITEMS

Dr. Sherwood Dix, health officer of Norfolk, Va., has sent in his resignation. Dr. Dix will enter the United States naval reserve force.

Dr. John A. McKay, of Dunn, N. C., died on October 28th. He was 87 years old. Dr. McKay was a practicing physician for years, and one of the most prominent of his section.

Dr. J. H. Garlick, of Staunton, Va., died October 9th, 1917. He died from an attack of apoplexy. He was seventy-five years of age and a native of Kent county, Va. Dr. Garlick was a widely known physician throughout Virginia.

Dr. Richard Hall Johnston, recently of Baltimore, Maryland, has removed his offices to the Banner building, Greensboro, N. C., where he will be associated with Dr. C. W. Banner in diseases of the eye, ear, nose and throat. Special attention to direct laryngoscopy, bronchoscopy and esophogoscopy.

Dr. Henry DuBose, one of the best known citizens of Sumter county, South Carolina, died unexpectedly on October 29th at his home. Until a few years ago, and when he was in his prime, Dr. DuBose had an extensive practice and was a leader in his community in all matters of public interest.

Dr. Samuel Albert Rhyne, formerly of Sarah Leigh Hospital, Norfolk, Va., but now at Camp Greene, Charlotte, N. C., and Miss Mary Virginia Cooks, of Norfolk, Va., were married on September 25th. Dr. Rhyne has recently received his commission as first lieutenant in the U. S. medical reserve corps.

Dr. Daniel Trotter of Madison, Ga., died on October 16th. Dr. Trotter was a prominent physician and well known in North Carolina.

He graduated four or five years ago from the Medical College of Atlanta and has since been associated in the practice of medicine with his father, Dr. R. W. Trotter.

Drs. A. P. McElroy and P. K. Switzer have rented buildings in Union, South Carolina, and are fitting them up for a hospital, and it will soon be ready to receive patients. The promoters of the enterprise will open the doors to regular physicians, who desire to treat patients in the institution, and will welcome such co-operation from other physicians.

Dr. W. P. Craven and Miss Mary Andrews were married at the residence of Mr. and Mrs. Frank H. Andrews, of Charlotte, N. C. Dr. Craven is a leading physician and a prominent citizen of Mecklenburg County. He has been an active practitioner of medicine for a number of years. He has, on several occasions, represented the county in the State Legislature.

Dr. W. A. McPhaul, of Lumberton, N. C., has been appointed county health officer. His immediate work will put into operation two of the most important health laws the state has been called on to enforce. These are the quarantine and medical school inspection laws. Later, Dr. McPhaul will take up the unit of life extension work, and in the spring he will take up anti-typhoid work.

The Norfolk, Va., Medical Society.—At a recent meeting of this society the following officers were elected for the ensuing term: President, Dr. Burnley Lankford; vice-president, Dr. Powhatan S. Schenck; secretary and treasurer, Dr. W. W. Silvester. The Society heartily endorsed the Red Cross parade to be held here October 20th, and voted to use every effort to get every member of the organization to participate.

Dr. Paul P. McCain and Miss Sadie Lou McBrayer were married October 20th at the home of Dr. and Mrs. L. B. McBrayer, of Sanatorium, N. C. Dr. McCain graduated at Erskine College, of South Carolina, a few years ago and later took his M. D. degree at the University of Maryland. After graduating in medicine, Dr. McCain specialized in tuberculosis and is now assistant superintendent of the state sanitorium.

Dr. Hugh Thomas Nelson, Jr., of Charlottesville, Va., married to Miss Edith Rankin, October 9th, 1917. Dr. Nelson is the son of the late Dr. H. T. Nelson, a well known surgeon who died in Charlottesville a few years ago. He is a graduate of the Medical School of the University of Virginia. In August, the doctor was called into service by the War Department and sent to Camp Lee, Petersburg, where he is now stationed.

To Officers of the Medical Reserve Corps U. S. Army Inactive List.—Word received from the Surgeon General of the U. S. Army, conveys the information to officers of the Medical Reserve Corps of the United States Army, inactive list, that assignment to active duty may be delayed, and that they are advised to continue their civilian activities, pending receipt of orders. They will be given at least 15 days notice when services are required.

Dr. Francis L. Parker has resigned as major in the army. This action followed appeals made to Major Parker, by several prominent medical men interested in the Medical College of South Carolina, and Governor Manning, that his services could be of greater value in carrying forward his work in the medical college than in the reserve corps of the army.

Major Parker entered the reserve corps two years ago, and on the 22nd of May, he was ordered out, and has been in active duty ever since.

Students of the Medical College of Virginia are doing their share in raising an allotment of the million dollar fund which has been undertaken by the college men of North America. Reports from all the classes in this institution show that their allotment of three thousand dollars has been raised.

In addition to this fund for war work, the Medical College students are going to give an ambulance to Russia. It is hoped to have it delivered to the Russian army before Christmas. All of this is in addition to what the students have contributed to the Army Young Men's Christian Association, and local students' association.

Resolution adopted unanimously by the Clinical Congress of Surgeons of North America at Chicago, October 25, 1917:

Whereas: The experiences of the nation convince us of the necessity for universal military training, to furnish qualified men for defense, to strengthen manhood and mental poise, and to make for a more efficient citizenship, and

Whereas: We believe it will democratize youth and furnish discipline, while developing physical force and endurance, and will produce better fathers and workers for the ranks of peace;

Therefore: Be it resolved that the Clinical Congress of Surgeons at its eighth annual session urges upon Congress at its coming session the passage of a measure along the general lines of the Chamberlain Bill for Universal Military Training, and that the cantonments now used by the National Army be utilized, if possible, for such work.

The Roanoke, Va., Aacademy of Medicine, before an audience of nearly two hundred members of the Roanoke Academy of Medicine and physicians of the surrounding counties and prominent citizens of the city, at the Chamber of Commerce, on the night of October 23rd, listened to very able addresses by Major John G. Nelson and Lieutenant T. McKinney, of the army medical corps. Colonel James P. Woods, R. H. Willis and Dr. W. B. Foster made stirring appeals for medical officers in the United States Army.

Major Nelson and Lieutenant McKinney have been appointed as a board of examingin officers to cover the state of Virginia for the purpose of recruiting the physicians for which there is such a crying need in the military service. Dr. Nelson's talk was especially interesting. It was eloquent in its simplicity and earnestness. He stated that the type of physicians needed for the army service is the men at the top of his profession, the best of the practitioners in the community. He said that the call is urgent, since it takes at least 20,000 doctors to properly care for the sickness and wounds of a million soldiers. To obtain physicians in such large numbers it is necessary for the greatest sacrifice to be made, not only be the men of the medical profession, but also by the general public.

Announcement.

At about the time that the Medical Review of Reviews was founded, Professor Dillon Brown, of New York, established a semi-monthly journal devoted to the diseases of children, called Pediatrics. The opening article was by A. Jacobi and the leading physicians of the city, among them, J. Lewis Smith, Reginald H. Sayre and William H. Park contributed to its pages. Latterly it has been edited by William Edward Fitch, but Dr. Fitch has recently been appointed a major in the United States Army, and we have acquired his blue-pencil and subscription list.

Pediatrics will no longer appear as a separate publication, but has been incorporated with the Medical Review of Reviews. Beginning with January, howev-

er, the Medical Review of Reviews will contain a special department devoted to Pediatrics. This feature is but one of the improvements scheduled for the coming year. Important Symposia are now in progress, the editor will contribute a second series of Pathfinders in Medicine, a staff of associate editors is being formed and thus the Medical Review of Reviews, in entering upon its twenty-fourth annual volume, promises to be more serviceable to the profession than ever before.

BOOK NOTICES

White and Martin's Genito-Urinary Surgery and Venereal Diseases, by Edward Martin, A. M., M. D., F. A. C., S., John Rhea Barton, Professor of Surgery, University of Pennsylvania, Benjamin A. Thomas, A. M., M. D., F. A. C. S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine; Instructor in Surgery, University of Pennsylvania, and Stirling W. Moorhead. M. D., F. A. C. S., Assistant Surgeon to the Howard Hospital, Phil., Pennsylvania. Illustrated with 322 Engravings and 21 Colored Plates. Tenth Edition. Price $7.00, Philadelphia and London, J. B. Lippincott Company.

The ninth edition of this very valuable book has been exhausted for a good long time. This has not been on account of the unwillingness of the publishers to get out the tenth edition. It has been almost impossible for the authors to reset and re-write, and re-illustrate the tenth edition, so that it would be up-to-date in every way and consistent with former methods of the editors and publishers. They have omitted many things that appeared in some of the former editions, because they have passed and have been supplanted by something newer and better.

They have incorporated in the text a brief but practical presentation of vaccines and serums; tests of renal function which are found most serviceable in estimating operative risks; high frequency desiccation; laboratory diagnosis of syphilis and control of treatment; the accepted conservative and radical treatment of prostatic hypertrophy including those measures which have done so much to lower mortality. They have endeavored fully to present those therapeutic methods which have received the general approval of the clinically experienced.

They have not found, practically, that a continued positive Wassermann is a condition to be heroically combated at the expense of the patient's health, neither are the authors in accord with the belief that old symptomless syphilitics should receive either prolonged and continuous treatment or intensive courses with the sole view of changing their Wassermann, though we believe that such patients should be given intermittent treatment short of producing drug reaction through life ,that through mercury and iodides, should be the basis of this treatment.

They have not been convinced of safety or the special value of subdural injections in cerebrospinal syphilis, ataxia or paresis. The 422 engravings and the 21 colored plates are extensive and proper; they thoroughly illustrate the text, and are as fine as the reviewer has ever examined. The book contains 929 pages, printed on fine paper and makes a nice volume. The authors, as well as the publishers deserve the congratulations of the entire medical profession. They have given us a book of unusual merit and value.

Annual Report of the Surgeon General of the Public Health Service of the United States, for the Fiscal Year, 1916, Washington Government Printing Office, 1916.

International Clinics, a Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World, Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with Collaboration of Charles H. Mayo, M. D., Rochester; Sir Wm. Osler, Bart, M. D., F. R. S., Oxford; Frank Billing, M. D., Chicago; A. McPhedran, M. D., Toronto; J. W. Ballantyne, M. D., Edinburgh; Arthur F. Beifeld, M. D., Chicago; Rupert Blue, M. D., D. P. H., Washington, D. C.; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; Charles Greene Cumston, M. D., Geneva; Richard Kretz, M. D., Vienna; With Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Geneva. Volume III. Twenty-seven Series, 1917., Philadel-

phia and London, J. B. Lippincott Company.

This volume contains 306 pages, including the index, which is accurate and full enough for all practical purposes. Its illustrations are valuable, especially those representing the proper positions for Perineal operations. Several types of operating tables are illustrated; one for Uriologic operations, one for the demonstration of Salvarsan, and also a table illustrated suitable for Cystoscopy. The text associated with these illustrations is brief but very valuable to any one who is interested in this kind of surgery.

It gives me pleasure, to say again the statement that I have frequently made, that is, the International Clinics, is certainly one of the greatest and most valuable periodicals that comes to this office.

Nutrition and Clinical Dietetics, by Herbert S. Carter, M. A., M. D., Associate in Clinical Medicine, Columbia University; Associate Attending Physician to the Presbyterian Hospital; Consulting Physician to the Lincoln Hospital, New York. Paul E. Howe, M. A., Ph. D., Assistant Professor of Biological Chemistry, Columbia University, New York. Howard H. Mason, A. B., M. D., Instructor in Diseases of Children, Columbia University, New York; Associate Attending Physician to the Presbyterian Hospital; Attending Physician to the Ruptured and Crippled Hospital, New York. Price $5.50. Lea & Febiger, Philadelphia and New York, 1917.

In presenting this book the authors are conscious of the fact that dietetics is far from a mature science and that a book founded entirely on facts proved in the laboratory is as yet impossible. So much scientific progress has been made with regard to the nature of food and its utilization and requirements in health and disease, that were feeding merely a matter of food reactions, analogous to test-tube reactions, it would be a comparatively simple matter to prescribe a diet. In dealing with all things human, however, the personal equation is of immense importance and one can never foreknow how a food will affect different people under apparently similar conditions. It is on this account that accurate clinical observation will always be a prime factor in the successful feeding of patients. Not only should the probable effect of food under particular circumstances be known, but any variation therefrom should be met by an experience wide enough to indicate in which direction the next move may be made. So it is that dietetics must be deduced in part from an accurate knowledge of the chemistry of foods and of nutrition and in greater degree from a knowledge painfully acquired by previous experience in somewhat similar circumstances. It is also a fact that the same goal may often be reached by several roads, so that in most conditions different men may attain the same or almost similar ends by different methods; however, the principles underlying their efforts must be in accord.

In choosing data from the literature of dietetics it has been the aim of the authors to use only the more recent statements from reliable sources, the seeming exceptions only occur when facts or statistics of an earlier date have not been superseded by later investigation. The attempt has also been made to present the etiological factors of the disease under discussion in order to make the rational use of foods depend on these, as well as on knowledge of nutritional chemistry. Metabolism, in its broader aspects, has been discussed in each disease when enough is know nto make such consideration profitable. The symptomatology and treatment of disease, other than by diet, have not been given except insofar as it has been necessary to do so in the interest of a better understanding of the case or where general or special treatment has been bound up with the use of diets.

This is a valuable book written by men, not only nationally but internationally known. They have covered the field of dietetics thoroughly and it is thoroughly consistent with the most modern ideas that has been produced in the last year or two. The book makes a handsome volume of 646 pages. It is well arranged and well indexed.

Cause and Treatment of oCnstipation in Infants and Young Children.—In discussing this subject in the International Clinics Grules summarizes his views as follows: "I would like to urge that catharsis be abandoned as a routine treatment; to ask that the simple rules of diet be insisted upon, and that when these are not sufficiently effective such mechanical factors as glycerin suppositories and paraffin oil be resorted to and that only in extreme cases of acute constipation a cathartic be used."

Amputation From the Artificial Limb Point of View.—Openshaw, in The London Lancet, points out that one finger or the thumb of the natural hand is more useful than any apparatus. If there be left only the thumb or one finger, artificial fingers or an artificial thumb can be fitted, so that the patient has something to which he can oppose the remaining digit.

Amputation of the wrist-joint should not be done if it is at all possible to leave any portion of the hand, for it gives too long a stump for the proper application of an artificial hand. It is necessary to put the artificial wrist-joint at the end of the natural wrist-joint, and this brings the hand too far away from the elbow, and muscle power is lost.

In patients engaged in clerical pursuits, a new wrist-joint should be made by removal of one and a half inches of the radius and ulna, for to this an artificial hand can be fitted, so that the flexion and extension movements are converted into flexion of the interphalangeal joints of the index and middle fingers. The site for amputation of the forearm is one where the bones are divided at the lower end of the middle third of the forearm, for this gives a powerful useful stump, not too long, and capable of full pronation and supination.

A forearm stump where the ulna measures less than three and a half to four inches from the tip of the olecranon is often exceedingly difficult to fit with an artificial forearm bucket. The stump repeatedly slips out of the forearm bucket. As the supinator longus, the extensor muscles, and the flexors are useless, these should be removed in order to produce a flat surface upon which the upper and anterior edge of the forearm bucket can rest. If not more than two inches of the ulna (measured from the tip of the olecranon) can be left, the amputation should be performed above the condyles of the humerus.

Amputation of the elbow-joint should never be performed as an operation of election, for it is difficult, though not impossible, to fit an artificial limb to an amputation such an amputation be performed the condyles must be removed, for if left it is impossible to accurately fit an arm-socket unless it be laced up the whole length of the front, which considerably weakens it.

The best site for amputation of the arm is one between a point one and a half inches above the elbow-joint on the one hand, and three inches below the fold of the axilla on the other, and an endeavor should always be made to divide the humerus between these two points.

With regard to the shoulder, it is easier to fit an artificial limb to an amputation where the head of the bone has been completely removed than it is to fit one to an amputation through the surgical neck of the humerus. It must be remembered that it is possible to fit an artificial limb to any amputation of the upper extremity.

At the shoulder-joint, by means of a molded leather cap, an artificial arm is adjusted to the body. Considerable space should be allowed between the arm and the chest wall by flattening the inner surface of the arm, so as to facilitate dressing. By adjustable straps and wires, the movements of the opposite shoulder can be utilized to bend the elbow of the artificial arm, and by a similar arrangement, passing round the chest and down the artificial arm to the thumb, the latter can be moved by abducting the opposite arm.

In amputations it is essential that the nerve trunks should be cut as short as possible and the ends of the stump should be covered with a loose movable non-adherent skin-flap.

With regard to the lower extremity, if the amputation has been of the digits and the bone is well covered with the scar on the dorsum, a boot can easily be fitted, and the patient walks well.

No skin-grafting of a granulating Chopart gives the least chance of a useful stump. The scar ultimately becomes the lowest part of the foot in consequence of the contraction of the tendo Achillis, and will not bear the weight of the body without ulceration.

Often a suppuration has followed a guillotine amputation performed through the center of the tarsus. A Syme is ultimately necessary, and should be resorted to early.

Neither a subastragaloid amputation nor a Pirogoff gives the most useful foot.

A Syme amputation is the best about the ankle-joint. It should be performed exactly as described by its originator, the malleoli and a layer of the tibia a quarter of an inch thick being removed. This gives room for a joint in the artificial foot itself instead of in the lateral steel supports. The amputation in the leg between the ankle-joint (Syme) and a point six inches below the top of the tibia must be looked upon as likely to give an unsatisfactory stump,, an done which is therefore, a tentative amputation. Such a method gives an unsatisfactory stump

which is thinly covered, badly nourished, liable to blueness, anemia, ulceration, and sinus formation. It is only permissible as a temporary expedient.

The best amputation of the leg is one where the bone is cut four to five inches from the upper edge of the tbia where the lower end of the tibia is square and where it is well covered with healthy movable skin. A patient with such an amputation can carry a considerable part of the weight of his body on the end of the tibia, the remainder being borne by the lateral surface of the tibia and fibula and partly along the surface of the thigh.

After this amputation, with a well-fitting artificial limb, a patient can walk, run, and dance in such a way as to render it absolutely impossible, even for an expert, to decide which leg is artificial.

In this amputation the fibula ought to be cut half an inch shorter than the tbia, otherwise it seems to increase in length and to project. Should, however, the end of the tibia not be well covered with movable skin the weight of the body cannot be borne on the end of the stump, and has to be carried on the lateral surface of the tibia and fibula, the sides of the thigh, and the tuber ischii.

It is imperative that in any amputation at the upper third of the leg the knee-joint should be kept straight, as flexion may render a further amputation necessary, either through the knee-joint or just above it. If the knee-joint is allowed to become flexed the hamstrings and the posterior ligament contract and shorten, and all these structures, even the posterior ligament, may require division; and even then it may be impossible to straighten the leg, and amputation at or above the knee-joint may be necessary.

Even one inch of the tibia, if well covered on the under surface, gives a more useful stump than an amputation through or above the knee-joint. The endeavor should always be made to divide the tibia in such a way and at such a point as to get a good covering for its cut surface. If this is not possible there will be a scar over the end of the tibia, and it is better to remove the tibia and the patella by some sort of incision similar to that for a Stephen Smith amputation.

In every Stephen Smith amputation the patella ought to be removed, for if left it retracts and forms a wobbling excrescence, which prevents the accurate fitting of a thigh bucket. It is quite easy to fit the leg after an amputation of the knee-joint.

A transcondylar amputation of the femur gives a very good stump. The periosteum should be pushed up and replaced over the edges of the divided bone. When the amputation is above the condyles, up to a point higher than the middle of the femur, the artificial leg should be made with a lacing bucket of leather, not wood. The tuber ischii should rest upon its upper edge, so that the patient's weight is transferred to the ground through the tuber ischii and partly through the friction of the skin against the inside of the bucket.

At or above the middle of the femur every amputation case should be fitted with a pelvic band, which should be accurately molded to the body before the steel is hardened. It should extend from just below the anterior superior spine on the affected side round the body below the iliac crests to the opposite anterior superior iliac spine. The hip-joint in this pelvic band should be at a point opposite the center of the great trochanter and half an inch above it. Such a elvic band prevents the wobbling of the thigh and considerably improves the patient's gait.

Amputations in the upper third of the thigh, where the bone is divided at any point between the small trochanter and two inches below it, give a stump well-nigh impossible to fit with an artificial limb. If more than two inches of bone below the small trochanter cannot be left, then the femur should be divided at the small trochanter or through the great trochanter. It is easier to fit an artificial limb where the bone has been exarticulated at the hip-joint than it is where the bone has been divided through the great trochanter or at the small trochanter, so that if a long thigh stump cannot be made there need be no hesitation in removing the upper end of the femur, provided, of course, that the condition of the wound as to sepsis and of the patient will allow of this rather more severe proceeding.

Polycythemia.—An interesting clinical lecture of a case of polycythemia by Beifeld is reproduced in the International Clinics for September. He deals with the differential diagnosis between polycythemia and other conditions associated with an increase in the number of red blood corpuscles, such as Osler-Vaquez's Disease and Geisbock's Disease or Polycythemia Hypertonia. The treatment of polycythemia is largely symptomatic. For this purpose venesection is the most efficient agent. In Beifeld's case the blood pressure fell from 220 m. m. syptolic and 130 diastolic to 170 m. m. syptolic and

100 diastolic. In addition the red cells fell from 9,600,000 to 8,400,000 the haemoglobin from 115 to 105 per cent. The venesection must be repeated from time to time.

The Department of Oral Surgery of the Harvard Surgical Unit.—Major V. H. Kasanjian makes this report. Cases are admitted to the department usually from two to three days after injury. They are suffering from mental shock, toxic absorption from the wounds, and from lack of nourishment owing to the inflammation of the soft tissues and the derangement of the organs of mastication.

The mouth is irrigated at frequent intervals during the day and night, in most cases every two hours, and in addition the mucous surfaces are swabbed with cotton pledgets saturated in tincture of iodin or hydrogen peroxide, to remove mechanically mucous deposits and adherent food particles.

The majority of operations are performed under a local anesthetic. This procedure makes it possible to remove foreign bodies, fragments of teeth or roots, and detached segments of bone. The suppuration or necrosis during the early stages of treatment is thus materially reduced.

They believe that early immobilization of maxillary fractures means the quickest and most satisfactory recovery. While technical difficulties may stand in the way, since nearly every splint must be made to suit each individual case, they have devoted considerable attention to the classification of the type of splints, and the simplification of their preparation.

For cases of ordinary severity, the usual splints (with or without modifications) familiar to the oral surgeon are used. In many casese of extensive destruction of hard and soft tissues it was found that intraoral splints were inadequate, and an external support, consisting of a series of vulcanite plates fitted over the forehead, with a headgear of straps, was developed. With this appliance as a base, the tissues of the mouth, nose, eyes, and neck are under control, either during the process of scar contraction or after plastic operations.

In the many cases of extensive loss of the mandible accompanied by laceration of the lower part of the face and neck, a sectional or folding artificial jaw has been successfully used; its acts as a framework for plastic operations, is easily removed, and at the same time maintains the contour o fthe lower part of the face.

In restoring the upper jaw, a satisfactory means of retention and also of resistance to the force of mastication has been designed, and in cases in which the loss o fthe mandible has been sufficiently extensive to destroy the function of the temporo-mandibular joint, a mechanical condyle has been substituted.

The special septic complications, apart from the usual conditions of local sepsis in the wound, which have been observed, are septicaemia, cellulitis, and bronchopneumonia. No cases of pyaemia have occurred.

Septicaemia.—There have been two cases of septicaemia, both ending fatally. In each the wounds of entry and exit were small. In one there was a scarlatiniform rash and the infection was thought to be streptococcal, but no blood cultures were made. In the other, growths of a bacillus were obtained from samples of blood taken on two successive days. The bacillus was not identified, as it died off in all the subcultures.

Cellulitis.—A form of cellulitis spread from the wound over the face and scalp has been observed in several instances. It was accompanied by pyrexia, but in no case did the patient seem very ill or suffer from any serious consequences. The affected area of skin has been light pink in color, slightly tender, with a definite induration at the spreading margin. These cases have been regarded as mild erysipelas, and have been treated as such. In some instances the condition has recurred in the same patient.

Bronchopneumonia.—This has been one of the most fatal complications. Preliminary septic bronchitis has occurred in some cases; in others the onset of pneumonia has been sudden. Empyema and multiple abscesses in the lung have been common, and the mortality has been high. The pulomnary infection seems to be attributable, as a rule, to the inhalation of septic material from the mouth, and a high percentage of the cases has followed general anaesthesia. Many patients were suffering from bronchopneumonia at the time of their admission, and it was usually found that they had already been operated upon elsewhere under general anaesthesia.

The practice now is to employ local anesthesia whenever this is possible for operation upon patients with wounds which communicate with the mouth. If general anesthesia is necessary, special precautions are taken to prevent the entry of septic material into the air passages.

So far as concerns the soft tissues, these are considered under the following headings:

1. **Primary Suture.**—There does not appear to be much scope for primary suture of gunshot wounds complicated by fracture of the jaw, for reasons which are manifest. However, so long as general anesthesia is not employed, some advantage may follow accurate primary suture of those portions of a wound which involve the lip margins, the eyelids, the alae of the nose, portions of the external ears, or the outlying tributaries of a radiating wound, provided such suturing is limited, and no attempt is made to close the entire wound.

2. **Secondary Suture.**—Early secondary suturing has been increasingly employed of late. The interval that has been allowed to elapse between the infliction of the wound and its complete or partial closure has varied with the condition of local sepsis, but has most often been between the fifth and twelfth days. B. I. P. has been used as an adjuvant in these operations. The use of early secondary suturing has done much to lessen the amount of deformity from scarring.

3. **Flap Operations.**—Although primary or early secondary suturing may be practised with success in some cases, yet extensive operations required for reconstruction of the face to cover deficiencies which have been brought about by actual destruction of tissue, or by scarring and laceration, are invariably postponed until all suppuration has disappeared. Primary or early secondary suturing may have to bring the edges of a lacerated wound into apposition or suturing may have been done at a later date to extend mucous surfaces or to lessen the deformity as a preparatory measure for an extensive plastic operation. In other words, in the first instance the suturing reduces the size of a wound in which there is no loss of substance, and in the second instance it lessens the area to be covered by flaps. In all cases in which there is an appreciable loss of substance and a plastic operation is contemplated, an appliance to reproduce the bony tissue is always made to serve as a framework, to give a natural contour to the soft tissues of the face or neck, and to prevent undue scar contraction.

Even for extensive plastic operations local anesthesia is almost invariably used, because the majority of patients prefer it to a general anesthetic, while from the operator's point of view it is better because he can take his own time to obtain juxtaposition of the flaps, the loss of blood is much less, the patient is quiet and under perfect control, and the dangers of a prolonged operation are reduced to a minimum.

Among 400 cases of gunshot wound of the face with fracture of the upper or lower jaw treated in this department there have been 34 cases of secondary hemorrhage (8.5 per cent.), and of these 7 were fatal.

Injury of one or both lingual arteries in the floor of the mouth has been the chief cause of serious bleeding. In the majority of cases it has not been possible to secure the bleeding point, and proximal ligature has been employed. This, however, has not always been satisfactory, as it is often impossible to identify with certainty the vessel which is bleeding. Efforts to overcome this uncertainty by ligating the external carotid artery were not encouraging. Owing to the dropping of the fractured jaw and other anatomical and pathological derangements, the external carotid is not easy to find and ligate in these cases, the operation is somewhat prolonged and has a high mortality; moreover, concomitant injury of both linguals is not sufficient. Recently we have had better results by direct ligation of one or both lingual arteries whenever the anatomy of the wound was indicative of injury of these vessels.

Of 436 recorded cases of injuries to the face and jaws treated in the department between July, 1915, and January, 1917, 19 patients died from the following causes:

Hemorrhage	7
Bronchopneumonia	5
Cerebral complications	4
Septimecia	2
Collapse	1

It is hard to make accurate analysis of the percentage of deaths among patients suffering from gunshot wound of the face and jaw, because wounds of other parts of the body may exist which are of more serious consequence than those of the jaw. Of the four cases which died from cerebral complications, three were suffering from fracture of the base of the skull and one from spinal injury in addition to the jaw wounds.

Most of the patients who succumbed to bronchopneumonia had contracted this complication previous to admission to the department.—British Medical Journal.

Cinnamon as a Prophylactic in Measles and German Measles.—Drummond (British Medical Journal) says that a

course of cinnamon is an excellent prophylactic against measles, confirming a previous observation. Its prophylactic use in German measles was tried in the cases of twenty delicate children who were exposed to an infected nurse. Each of the children received powdered cinnamon with his food night and morning and no case of the disease developed among them. The treatment was continued for about three weeks. The drug, in the form of twenty-five drop doses of the spirit, is also one of the most effective remedies for acute coryza.

Primary Removal of Projectiles—Stabsarzt Professor Rehn has discussed (Bruns' Kreigschir.. Heft, 1917, xxxvi, p. 220) gunshot wounds from the point of view of the primary removal of lodged projectiles. While primary removal should never be undertaken in uncomplicated wounds of the thorax, in wounds of the extremities, when produced by fragments of large or medium size, it constituted the standard treatment. On the other hand, in presence of a widely open pneumothorax with laceration of the lung primary removal was desirable, while in cases of multiple grenade wounds of the extremities and of the superficial soft parts of the body generally no systematic removal should be undertaken, as the small fragments either become encapsulated or readily discharged if suppuration occurred around them. Operation on the abdominal cavity was never performed solely with a view to removing the projectile. The time for operating must largely be determined by external circumstances, but removal of a lodged projectile should be carried out in the primary stage whenever possible, since operative measures were frequently useless after the lapse of a few days. Operation in the intermediate stage, which commenced about thirty-six hours after wounding, was especially to be avoided. During this period there occurred a renewal bacterial invasion and greatly increased vulnerability of the tissues, most distinctly marked in wounds of the head, but no less dangerous in those of the extremities and body cavities.

Brain: Expectant treatment was as a rule adopted, even where the foreign body had been precisely localized. In specially favorable conditions, when the fragment was of such size and in such position as to be easily reached, and was of a kind suitable for the use of the magnet, extraction was permissible in the primary stage. In the intermediate stage, all intervention not imperatively called for was avoided, any additional injury inflicted in this stage being liable to be followed by rapid spread of the infection to the vital centres or ventricles, or, in more superficial injuries, by extensive prolapse. The rule, therefore, was that removal of the projectile in the primary stage was permissible in certain conditions, but inadmissible in the intermediate stage.

Abdomen: In penetrating wounds of the peritoneum, with wound of the viscera, operation was directed to the injuries inflicted rather than the removal of the projectile. The preliminary localization of the latter was therefore omitted, since it increased the depression of the patient. Moreover, it was unwise to place too much reliance on indications derived from the X-rays, for wounds which appeared to be purely superficial often proved to be accompanied with contusion of the viscera, performation of the peritoneum, and subcutaneous prolapse through small peritoneal wounds. Penetrating wounds o fthe abdomen were preferably treated at the main dressing station, reinforced with a small operating sectio nfrom the Feldlazarett. The erroneous view was still held by some surgeons that it mattered little whether an abdominal case was transported five or fifteen miles, the delay in operating being but trifling. The time of operating was, however, of small importance compared with the depression in the patient's condition resulting from prolongation of the transport. Operation was not undertaken during the period of shock, nor immediately on the improvement in the patient's condition which followed the use of stimulants and intravenous injection; unless this improvement persisted for several hours, time, which could be devoted to other patients, was not wasted on the case. Except where the peritoneum was extensively contaminated with feces, irrigation was restricted as much as possible, especially when evidences of localization of the inflammatory process existed; unnecessary displacement of the viscera was avoided. Clinical indications often served as a guide to the internal injuries, but in the absence of these no prolonged search for the projectile was made, for as a rule it was readily found in all cases where its removal was possible. By a strict adherence to these details Rehn succeeded in reducing the mortality in abdominal wounds with lodged projectiles to 50 per cent.

Extraperitoneal wound of the large intestine was suitable for primary opera-

death from the third to the fifth day, with signs of commencing general infection; or failure to rally after the operation, due to traction on the hilum of the lung caused by the lung fixation; (3) the shock of the operation super-added to that of the injury and subsequent transport.

Rehn based his treatment on a consideration of these facts. Wide opening up of the pleural cavity was adopted only where severe hemorrhage was present or the chest wall had been extensively ripped up by the injury, and in such cases alone was an attempt made at primary removal of the projectile. The danger of dragging on the hilum of the lung was avoided by the use of percutaneous sutures for lung fixation; this had the additional advantage of bringing large areas of the pleural surfaces evenly into contact. The sutures were placed in the third or fourth intercostal space anteriorly, laterally in the fourth intercostal space anteriorly, laterally in the fourth or fifth, and posteriorly in the fifth, and were left in for eight days. Open pneumothorax without great loss of substance in the chest wall received purely expectant treatment, the patient being placed in a suitable position and excision of the wound being dispensed with. Percutaneous fixation of the lung was performed in such cases when there was severe infection of the wound, in view of the tion, but this was often impracticable owing to difficulties in diagnosis, except when a primary fecal fistula was present. Primary removal was also performed in extraperitoneal wounds involving the bones of the pelvis. Delay in operating in these cases beyond the first twenty-four to thirty-six hours exposed the patient to general infection from the loose cellular tissue of the pelvis.

Thorax: In the primary stage expectant treatment was, as a rule aopted, and in uncomplicated cases operation was restricted to aspiration, even in presence of severe infected hematoma, until adhesions had securely fixed the lung and isolated the effusion and pulmonary wound —that is, until the nineteenth day. This rule was necessarily discarded in cases complicated with grave hemorrhage (lungs, heart, great vessels) or open pneumothorax. The customary treatment of open pneumothorax was to open up the pleural cavity widely. But this course was followed by numerous failures attributable mainly to three causes: (1) Loosening of the sutures between lung and chest wall, with consequent incurable secondary pneumothorax; (2) possibility of secondary pneumothorax arising. Cases of open pneumothorax somewhat severer than these were treated by excision and primary suture of the wound with lung fixation as above described. For expanding the lung in these cases careful aspiration of the pleural contents was preferable to the use of pressure apparatus. Rehn reckoned the intermediate stage in wounds of the thorax as extending from the second to the nineteenth day. In this stage treatment was as far as possible expectant. Apart from severe secondary hemorrhage the only condition that could give rise to doubt as to the line of treatment was acute empyema. This condition, complicating an even temporary pneumothorax, was much graver than the ordinary infected hemothorax, and if neglected might be succeeded by a rapidly fatal general infection.

In spite, therefore, of the danger from secondary open pneumothorax and postoperative general infection which operation in the intermediate stage involved, rib resection was performed if the case appeared to be urgent. The resection was carried out after the fourth day, when the empyema might be considered to have become localized. In the secondary stage conditions were favorable for the removal of a lodged projectile. Rehn deferred the description of the method to be employed, merely stating that he was in favor of early removal, at the same time giving a warning that it could not be successfully undertaken in the absence of clear indications and an appreciation of the difficulties to be encountered.—The British Medical Journal.

Neurasthenia in Soldiers of the Home Forces.—A report of this condition and its effects has been made to the Medical Research Committee by Dr. Burton-Fanning and published in a recent issue of The London Lancet. The term neurasthenia he uses in its widest sense to include disorders of the nervous system which are believed to have no organic basis. The fact of the frequency with which neurasthenia underlies patients' maladies in civil practice and the unawareness of either them or their doctors of the true explanation of the symptoms even while the patients are at work hampers diagnosis. He was therefore not prepared for the astounding prevalence of neurasthenia in the occupants of beds in a military hospital. The country, he considers, is suffering an enormous loss of man power on this account, aside from

the great expense, the occupation of beds by these men, and the moral and physical deterioration of the patient. Numbers of his patients have spent far more time in hospitals and convalescent homes than with their units. To a large extent the doctor believes these losses could be prevented.

During ten months he had charge of a number of medical beds in the First Eastern General Hospital, Cambridge, which had carried from time to time between 120 to 180. Into these beds 2,240 patients were admitted during his service, of whom 640 came in convoys from overseas and the remaining 1,600 were from Home Forces. Out of the last number he found 509 to be suffering from neurasthenia and to be free from any organic disease, averaging about one-third of the admissions into medical wards from Home Forces from neurasthenia. A large proportion of them realized that they were of a nervous temperament, and that this constituted their disability. A larger number were more or less ready to admit that they were nervous, but had not connected their supposed malady with nervousness. The remainder of the patients were unwilling to believe that their symptoms were not caused by disease of an organ, an dthey would not allow that their nerves had troubled them. With a few exceptions, they were sure of their unfitness for military service and did not conceal their resentment at being called up.

The doctor gives a picture of the neurasthenic from boyhood on, showing the existence always of a nervous temperament. The patient is often an only son with bad parental training. Later trials have not been met philosophically, and the mind is constantly occupied with disquieting thoughts. The nervous system becomes overwrought and oversensitive, and thus the working of the whole economy is deranged. A very small proportion of these patients had enlisted voluntarily. Before the date of compulsory service there was seen in this hospital nothing to compare with the recent outbreak of neurasthenia. Their heart and soul are not in their service, they dislike the work, and find their companions uncongenial.

While the symptoms are never confined to any one region, weakness, prostration, a feeling of exhaustion, or sudden collapse are invariable, and Fanning stat s lapse are invariable, and Fanning states that our minds must be at peace if we are to possess energy and joie de vivre. This these neurasthenics lack. Rheumatism is the most common avowed cause of disability, especially acute rheumatism. However, disquietude of mind is by far the most common cause of headache and backache. When complaint of the limbs is made it will often be found that the subjects of these painful limbs have long been of neurotic temperament, and the trial of a long march concentrates their attention on their limbs and increases their so-called rheumatism. Gastritis is another complaint particularly affected by these patients. The heart, according to Fanning, is the seat of some sensations in all neurasthenics, whatever may be the main complaint. Practically every other organ may receive its share of attention as a seat of trouble for these neurasthenic men.

In discussing means of prevention, the doctor considers that in general the prevention of neurasthenia comes within the sphere of education. The atmosphere of the English public school seems to be one means to prevent neurasthenia. Sedentary occupations seem to have a tendency to increase the condition. Recruits would show fewer breakdowns if they could be better classified and gradually got on full drill. It is everything with these men to establish self confidence. Again when the case comes to court, the physician should be able to make a proper diagnosis of the case and thus assure the patient of the safety of his condition and administer sufficient reassurance to aid in recovery.

The treatment resolves itself into an attempt to remove from the patient's mind whatever is the disturbing influence. The patient's confidence must first be gained by the physician; a careful physical examination should be made, with explanation of supposed symptoms. Occupation is much better than rest, and Fanning had the men put to marches as soon as they were able.

The writer does not consider that real fighters can ever be made of the majority of these neurasthenics, although a small proportion may return for service. The neurasthenic cannot be fired with the spirit required in attack or with the willingness to make the supreme sacrifice. But he concludes that there should be plenty of work at home or behind the line of which they are quite capable and which, after a little treatment perhaps, they would perform efficiently.

Arsenic Content of Normal Urine.—Bang has shown that arsenic to the ex-

tent of a definite percentage may be present in normal urine. Of twenty-seven subjects studied only three had no arsenic in their urine. Fifteen others showed up to 0.1 mgm. in the diurnal urine and in nine others ahe amount ranged from 0.1 to 0.2 mgm.—Hospitalstidende.

Miscellaneous.

The Relation of Lymphatic to Pulmonary Tuberculosis.—Dr. F. Harbitz, professor of pathology at the University of Christiana, has lately published his observations on the post-mortem material passing through his hands in the period 1904-15. His earlier work, published in 1905, on the frequency, localization, and modes of dissemination of tuberculosis, has been supplemented and criticised in the light of his later investigations, and the result is a valuable contribution to some of the most vexed problems of tuberculosis. The analysis of this work, contributed by Dr. K. F. Andvord in Norsk Magazin for Laegevidenskaben for July, shows that among the 2,906 necropsies in the years 1904-15 there were 431 deaths from tuberculosis, the relative mortality from which was, therefore, 14.8 per cent. Among children under 15 years the tuberculosis mortality was 19 per cent., among adults only 14 per cent. There were 203 cases of advanced tuberculosis of the lymphatics, including 61 of generalized lymphatic tuberculosis (32 adults, 29 children).

Dr. Harbitz has come to the conclusion that, as far as tuberculosis of the lymphatics is concerned, the disease usually spreads from one group of glands to another through the lymphatic system by a continuous process. Spread of infection by more casual and intermittent means is, he believes, comparatively rare; but he suggests that hematogenous infection must be reckoned with when the first infection of a lymphatic gland is traced to childhood. According to his figures, it is a discouraging fact that 40 per cent. of all the cases of generalized lymphatic tuberculosis in adults terminated fatally in chronic pulmonary tuberculosis. And in this form of pulmonary tuberculosis the disease seldom originated as a primary infection of the lungs by inhalation, but as a secondary, hematogenous infection from the lymphatic glands. Dr. Harbitz's investigations also afford a fairly reliable pathological, anatomical basis for the hypothesis that the pulmonary tuberculosis of adults is often a late sequel to infection in childhood. In 39 out of 219 cases of pulmonary tuberculosis (18 per cent.) in adults, he says, it was possible to demonstrate the presence of tuberculosis from earlier years, in most cases certainly from childhood. These old tuberculous lesions may have been, indeed possibly were, the source of the subsequent pulmonary tuberculosis. In other words, if his conclusions are correct, the pulmonary tuberculosis was anautogenous or endogenous re-infection. Tillisch, of Grefsen, has found among his patients suffering from pulmonary tuberculosis a history of exposure to infection in infancy in 18.5 per cent. That he should have arrived at practically the same figure as Dr. Harbitz is all the more striking as their methods were totally different, and both were bound to understate the case for infection in childhood. The tuberculin test, it may be noted, shows a far higher ratio of infection in childhood than 18 per cent. —The London Lancet.

Persistent Coughs and Colds.

Colds that linger invariably owe their persistence to inability of the body to exert sufficient resistance to overcome germ activity. Recovery, in consequence, is always largely a question of raising the general vitality and increasing bodily resisting power. To accomplish this, no remedy at the command of the profession is so promptly effective as Gray's Glycerine Tonic Comp. Under the use of this dependable restorative and reconstructive, the appetite is increased, the digestion improved, the nutritional balance restored, and the vital resistance so raised that the body can control infectious processes, and establish a safe and satisfactory convalescence.

In the treatment of colds, therefore, "Gray's" can be relied upon to raise the defensive forces of the organism and fortify it against germ attack.

The reawakened interest in ipecac is due to its proven specificity in amebic dysentery and to the fact that large doses of the absorbed ipecac alkaloids may be taken by mouth without nausea. Given in this way ipecac has been used extensively in a number of diseases where it was heretofore impracticable. It has been shown that the drug possesses decided value in pyorrhea, amebic infections of the tonsils, typhoid fever, and various intestinal disturbances such as flatulence, diarrhea, and constipation. The almost startling results that have been attributed to the administration of large doses of

ipecac by means of this new compound, make it appear that its field in therapeutics is even wider than first anticipated. It is said to be quite possible to give patients the equivalent of one hundred grains of the drug daily without nausea or vomiting and the tablets may be crushed before swallowing.

The Recovery From Typhoid.

In spite of the improvements in general sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safeguarded as in urban communities. Although many forms of treatment, designed to abort or cut short the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anemia is therefore almost always in evidence when convalescence is first established. The quickets and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence because it does not irritate or disturb the digestion, nor induce constipation.

In addition to these Alcresta Tablets of Ipecac, as this product is known, Eli Lilly & Company, the manufacturers, have recently added to their extensive line, an ipecac laxative tablet called Ipelax—a combination of the usual A. S. & B. with the addition of the equivalent of five grains of ipecac in each tablet, a dose heretofore quite unusual in a tablet without an enteric coating.

Interesting researches are being conducted at the Lilly Scientific Laboratories, and in the light of already published information it would seem that ipecac is entering upon a new era in medicine. Interesting literature will be sent our readers by Eli Lilly & Company on request.

Prophylaxis and Treatment of Frostbites with Tar.—Aside from trench foot congelations occur as a result of fighting in the snow, especially in high altitudes. This occurs in the most marked degree on the Italian front, and naturally some familiar, permanent, inexpensive substance which could serve both for prophylaxis and treatment would be a great desideratum. As a rule, the management of congelations has involved the use of asepsis and stimulation of the circulation, and many individual applications and procedures have been tested, beginning with protective coverings. Massage and frictions with vaseline, camphor and alcohol, progressive warm baths, and various antiseptic and aseptic dressings, have been employed to fill indications. But while members are saved, the men are incapacitated for a long time. In the deeper degrees of congelation sloughs must come away. Hence prophylactic measures must be tried out. Rabbi, a captain surgeon in the Italian army, thinks he has discovered a very superior remedy in Norwegian tar, which is hostile to fungi, saprophytes, and disease parasites, which protects against humidity and is itself practically stable. Tar contains many substances of antiseptic powers (phenol, cresol, naphthalin, toluol benzol, etc.). As used by the author, no local or general phenomena have been set up, and renal irritation fro melimination has never been seen. Cases cited by the author include both trench foot and mountain congelation. In an example of the latter we note that the soldier was admitted for congelation of the first and second degree, involving both feet. These were edematous, livid, and the seat of bullae. Sensibility was lowered, movements difficult and painful. The prognosis was that the process would reach the third degree. The feet were at once tarred. Four days later lividity had disappeared and swelling was much reduced, while pain was less and the feet felt warm. In two more days patient was able to walk without pain. Epidermis came away, leaving normal skin beneath. The patient was pronounced cured 14 days after admission. The number of cases treated was small, and dry gangrene alone was encountered. Whether the remedy would be equally valuable on moist gangrene remains to be seen.—Giornale di Medicina Militaire.

Decalcification of the Bones in War Traumatisms.—Delorme (Bulletin de l'Academie de Medicine) in examining 1,350 bone radiograms accumulated at the Grand Palais, Paris, found more or less extensive osseous decalcification in one half of all injuries of the metacarpus, radius, humerus, tibia, and both bones of the leg, in a little over one-third of the injuries of the femur, and in one-fourth of the injuries of the ulna. These do not, of course, comprise recent cases in which the bone disturbance has not as yet had time to become established. The importance of nerve injury as a factor in the decalcification is illustrated in that among fifty-four cases of old nerve injuries in the upper extremity, forty-one showed bone decalcification. Again, among thirty-seven cases of injury of the sciatic nerve or its branches, twenty-three showed decalcification. While injuries of large nerve trunks seemed especially potent as a factor in this condition, several plates showed marked trophic bone disturbance where very small nerves could alone have been injured. Of seven cases of ligation of a large arterial trunk, only one showed a slight decalcification. As a rule, the decalcification is of such a type as to render the affected bone orem transparent to the X-rays, the outer layer of the bone, however, standing out more prominently —though narrower—than usual. In some instances, however, especially in the short bones, the change consists merely in the assumption of a dark, soiled appearance throughout the bone, with the cortex less clearly defined and the bone as a whole streaked with linear, longitudinal dark spots, alternating with paler intervals or blotches. Careful comparison of plates seemed to show that this condition represents a preliminary stage of the bone disorder, passing later into the more definite decalcification already referred to. In the treatment of bone decalcification, to which as yet little attention has been paid, electrical procedures seem to have proven inefficient. Administration of phosphates, lime, magnesia, iron, silica in the form of mineral waters, and appropriate foods, together with arsenic in small doses and codliver oil in moderate doses, as recommended by Robin, is expected to give better results.

Ipecac has long been favorably known to the medical profession. Its value has been recognized by many practitioners in the treatment of amebic dysentery, as an hepatic stimulant and as an intestinal antiseptic.

Using Mails to Defraud by Sale of Medicine.—In a prosecution for using the mails to promote a scheme to defraud by sending through the mails letters and circulars containing false representations as to the value of a medicine made and sold by the defendant in curing many diseases by dropping it in the eye, and also stating that he was a great scientist, the Circuit oCurt of Appeals, Eighth Circuit, held that it was proper to refuse to admit in evidence a copy of the defendant's publication on the eye. At best it was merely a self-serving statement. If he wanted to prove that he was a great scientist by reason of having written and published that book, he should have introduced witnesses who were qualified to testify on that point. The jury was not the proper body to examine the book and determine from it whether he was a great scientist or not. Besides no foundation had been laid to prove the real author of the book. He might have employed a scientistist to write it and published it as his own work. The court held that the defendant was not entitled to a directed verdict. "The extravagant claims made for the preparation to cure all the diseases known, many of them of a nature which can only be cured by surgery; the undisputed fact that the preparation contained nothing but ordinary hydrant water of the city of Wichita, where it was prepared, with a little salt and sugar in it, the minute trace of boracic acid found in it being indigenous to the hydrant water of that city; the high price charged for it, at first $5 a bottle, afterward $3 a bottle, when the cost of its preparation was trifling; the testimony of the physicians that it had no therapeutic value whatever—all these proofs certainly justified the submission of the case to the jury to determine whether the so-called medicine was merely a scheme to defraud, and that the mails had been used for the purpose of carrying it out." A vital issue in the case was the intent of the defendant. "If he knew," the court said, "that the medicine was not a cure for the many ailments claimed for it, and in fact for none, the fact that many of those who used it believed that it had cured them would be no defense, no more than the defendant could have been found guilty because some of those who had used his medicine did not obtain the relief expected from it, if, as a reasonable man, he honestly believed or had reasonable cause to believe that it possessed the curative properties claimed for it. The evidence of his patients bore on his intent, and

therefore it was properly admitted by the court; but it was for the jury to determine what some or all of his patients believed.' Judgment of conviction was affirmed.—Samuels vs. United States, 232 Fed. 536.

Diaphragmatic Hernia in an Infant.—Laurell reports a female infant, 2 weeks old, suffered from attacks of suffocation on feeding and when being bathed. She was of slender build, and the chest was much distended upwards. Respiration was rapid, and the inspiratory phase was followed by excessive retraction of the epigastrium. Over the left chest the respiratory sounds were markedly puerile, while over the right nothing was heard except over the extreme apex of the lung, where a faint respiratory sound was audible. The percussion note over the left chest was normal, but no definite cardiac dulness was demonstrable. Over the right the percussion note was more resonant and tympanitic, except over a small area behind, near the middle line, where it was relatively dull.

The right side of the chest, therefore, evidently contained air, and the possible diagnoses were emphysema of the lung, pneumothorax, or coils of intestine invading the pleural cavity. The symptoms pointed to diaphragmatic hernia. Four months later this diagnosis was confirmed by the X-rays, which showed an enlarged pleural cavity distended by intestines. A curved line, 3 cm. below the upper limits of the thorax, indicated the lower border of the right lung. The heart and liver were much displaced to the left, and in the position of the right vault of the diaphragm was a curved line, probably indicating the gap through which the intestines had escaped from the abdomen into the chest. This gap was entirely on one side of the body, although in most cases diaphragmatic hernia the flaw in the diaphragm is much nearer the middle line.

Expectant treatment was adopted, and measures were taken to harden the child gradually with baths and open-air treatment to lessen the risk of pulmonary complications. These were considered a greater danger than intestinal obstruction. At the age of 8 months the development was almost normal, although the weight was only 5.8 kilos. Up to this age, when the patient was last seen, there had been no attack of dyspnoea since the first weeks of life. But with increasing activity there had also been greater frequency of the respiration. The prognosis, as in most cases of diaphragmatic hernia, was bad; but it was decided an operation should be deferred till the infant had grown larger and more vigorous and had, at any rate, reached the age of 2 years.—The Medical Review, London.

Tongaline exerts a manifest action on the nervous system of the secreting order of glands, it diminiches the uric acid content of the blood, and produces a substitutive irritation in the region of the articular surfaces. On account of the exaggerated vasomoter action of Tongaline, the irritation drives the poisonous deposits toward the emunctories, causing a great secretion of bile in the liver, an abundant diuresis in the kidneys and a serious diarrhoea in the intestines, while in the feces and in the urine we find a great quantity of uric acid.

These conditions secure the attainment of the desired effect, which is to expel from the organism all those agents, the accumulation and retention of which in the blood are the cause of rheumatism, neuralgia, grippe, gout, nervous headache, malaria, sciatica, lumbago, tonsillitis, heavy colds and excess of uric acid.

Physicians who long ago discarded ipecac medication because of the uncertainty of enteric coatings are welcoming ipecac "back to the fold" since it is now possible to administer massive doses of the drug without coating of any kind.

This heretofore unknown method of giving ipecac is made possible through the absorption of ipecac alkaloids with a purified form of hydrated aluminum silicate; and since, in this form, the alkaloids of the drug are not liberated until in the presence of an alkaline solution, the drug passes the stomach unchanged and the alkaloids are liberated in the intestinal secretions.

A Good Intestinal Eliminant.

In those cases of dyspepsia and gastric indigestion based on constipation, the use of a good intestinal eliminant will often give relief.

An over-filled colon frequently gives rise to anorexia and to distress and formulation in the stomach after meals.

A wineglassful of Pluto water taken in a tumblerful of hot water half an hour before breakfast is an efficient remedy and worthy of trial.

The French Lick Springs Hotel Company will cheerfully furnish samples—diet lists if you desire—for use in your experience with Pluto water will justify its continued use.

A New Disease Simulating Acute Rheumatism.—Chantemesse, Martruchot and Grimberg (Bulletin de l'Academie de Medicine) report the case of a woman thirty-seven years old, with a history of a rheumatic attack fourteen years before, who was admitted complaining of joint pains of two weeks' standing, increasing in severity and accompanied by lassitude. Pallor and dyspnea were noted, the pulse rate was 110, and the temperature 40 deg. C. Profuse sweats, a dry tngue, an apical systolic murmur, and slight albuminuria were also noted. Six grams a day of sodium salicylate was ordered, and in two days the temperature descended to 38.6 deg. Next day, however, meingeal symptoms supervened, with intense headache, great restlessness, tremor, and increasing fever. Two days later, marked but temporary diarrhea was noted. After another two day interval restlessness gave place to coma, and death followed. At autopsy the cranial contents showed congestion, hemorrhagic spots, and edema. In the recent endocardial foci and in the pia, cortex, and cerebrospinal fluid were found numerous examples of a new type of microorganism, appearing in thin, short rods in a young culture and in heavier, much longer, often curved organisms, progressing by a spirillar movement. In old cultures the organism showed long, branched forms, which later broke up into short rods, each developing in its centre a spore. This mode of sporulation distinguishes the organism from the actinomycetes and its mycelium from the bacilli proper—hence the new generic name, Mycobacillus synovialis, which the writers propose for it. Injection of the organism into rabbits often caused arthritis and nedocarditis, usually with diarrhea at a certain period of the disease.

Discrete Costodiaphragmatitis.—Mouriquand (Presse Medicale) reports having encountered over 150 cases of this condition within six months in a military hospital. In many the diagnosis was reached clinically, but some were revealed only by radioscopy. The exact site at which the disturbance may occur is ascertained in the individual subject by following the last rib toward the median line with the finger until it disappears beneath the sacrolumbar muscles, usually at a point eight or nine centimetres from the spinous processes. A horizontal line joining these points on the pposite sides lies precisely over the base of the thorax posteriorly. Lung resonance, under normal conditions, generally begins four or five centimetres, or two to three finger-breadths, above this base line on both sides of the chest, in spite of the higher diaphragmatic vault on the right. For the width of the bell of the stethoscope above the base line, the vesicular murmur is normally heard in an attenuated form, but above this with its usual distinctness. The subject with costodiaphragmatitis in some instances complains of slight dyspnea on exertion and dragging sensations in the chest, which render marching with the knapsack somewhat distressing; in other instances, frequently overlooked, there are no respiratory discomforts. In about one-half the cases, the anamesis reveals a former pleurotuberculosis. Radioscopically there is noted some opacity in the costodiaphragmatic sinus, which is partly filled with adhesions. Dullness to percussion rises two or three centimetres above that of the opposite side. Stethoscopic auscultation reveals a complete or almost complete absence of the vesicular murmur for some distance above the base line, and even above the upper line of dullness. In a few cases the evidences of costodiaphragmatitis are predominant in the infraxillary region rather than above the base line.

Experiences in Reconstruction Surgery of the Extremities.—In the September International Clinics Babcock calls attention to the needless sacrifice which is often made of extremities, especially the hands, which can be restored to a fair degree of usefulness by conservative surgery. The article is very profusely illustrated. He goes into considerable detail in showing how a badly injured limb may be saved, either partially or completely. The article which does not lend itself readily to condensation, should be consulted b yall interested in surgery. It is especially valuable for those entering the military service where many of the problems it deals with will be encountered frequently.

I order four ounces Tongaline, directing that two teaspoonfuls be taken in a half glass of water, preferably hot, every two hours for three or four doses or until the patient is thoroughly under the influence of the medicine; then one teaspoonful every three hours, until the attack has been aborted or the patient has recovered.

Purulent Bronchitis.—Hammond, Rolland and Shore, in The London Lancet, describe a form of purulent bronchitis which has occurred frequently among the troops and which has very often proved fatal. There are two general clinical types of the disease. The one is very acute and presents a picture closely similar to that of the ordinary lobar pneumonia with a sustained fever of about 103 deg. F.; blood streaked sputum at first, changing to purely purulent in a few days; pulse rate out of all proportion to the fever; dyspnea and cyanosis; "lung block" with embarrassment of the right heart, and death on about the fifth or sixth day. The second type is less acute and far less fatal. It has a swinging fever with a range of two to three degrees from day to day; initial frothy sputum, soon becoming purulent; a prolonged course of several weeks; much wasting; night sweats; slow convalescence; and relatively low mortality. In the great majority of the cases studied the Bacillus influenzae was isolated from the sputum, often in pure culture and often in association with the pneumococcus. Other organisms were also frequently present. The morbid anatomy of the condition varies from a lobular to a lobar pneumonic type with very pronounced inflammation and thickening of the smaller bronchi. There are also well marked signs of acute parenchymatous degeneration in the various important organs of the body including kidneys, liver, spleen, lymph nodes, and heart. Treatment is not satisfactory, but continuous inhalations of steam with benzoin or eucalyptus seem to give some symptomatic relief. The condition appears to be epidemic.

Treatment of Fracture of the Femur.—Judet (Presse Medicale) says that in most cases of infratrochanteric fracture of the upper third of the femur in soldiers he has had occasion to see bone union had occurred in a very faulty position, the two fragments sometimes forming an angle of ninety degrees, with marked shortening of the limb and great difficulty in locomotion. To avoid such unfortunate results, which necessitate a secondary osteotomy, it is absolutely essential that the limb be kept in abduction during repair. Abduction with an extension apparatus is unsatisfactory, as the patient is apt to move in bed and the redressings are painful. A large plaster spica should therefore be applied, the degree of abduction of the upper fragment being ascertained at the time of the initial operation on the wound and the lower fragment then immobilized in a corresponding direction. Aluminum or wooden splints should be incorporated in the cast in order to permit of making a large lateral opening in the plaster for dressing the wound. In fractures of the femur in general Judet has noted a tendency to relaxation of the knee, with subsequent difficulty in walking, requiring for proper correction a hinged knee apparatus. This difficulty is due to excessive traction on the leg by an extension apparatus, with too little traction on the lower portion of the thigh. Where extension is used, this must be carefully guarded against, even at the expense of diminishing traction, as a slightly shortened limb is preferable to a loose knee joint.

Acriflavine Paste as a Wound Dressing.—Bond (British Medical Journal) strongly recommends the use of a paste made by neutralizing one part of sodium carbonate with one and three quarter parts of stearic acid, with the addition of 0.1 per cent. of acriflavine. The paste is strongly antiseptic and bactericidal and should be applied directly to the infected surface after it has been thoroughly cleansed by approved surgical methods, including the removal of dead or severely contused tissues, foreign bodies, and the opening of all pockets. The edges of the wound should then be closed by suture, or at least partly closed to reduce the area left for granulation. The paste has the advantage over other preparations of not destroying the phagocytic activity of the leucocytes, although it does destroy a large porportion of the infecting organisms. Acriflavine can also be used in watery or alcoholic solution in strengths of 1:1000 to 1:2000 for cleansing the wounds before the application of the paste if they are badly infected. The paste can be used in cavities in bone as well as in the soft tissues.

Case of Progeria.—Schippers reports the case of a child five year sold who presented side by side evidences of arrested development and senile changes. While the fontanelle is still potent and the child undersized, the entire skin is like that of an old man, pigmented, atonic, wrinkled with senile atrophy in the pilous system. At least three other fully described cases are on record.—Nederlandsch Tijdschrift voor Geneeskunds.

Left and Right Sided Diastolic Murmurs in Aortic Insufficiency.—Tremolieres, Causcade, and Toupet (Presse Medicale) say that the prevailing tendency to look for the murmur of aortic insufficiency only in the second right intercostal interspace frequently results in an incomplete or mistaken diagnosis. Among sixty-six cases they studied, in only ten was the diastolic murmur heard loudest in the second right interspace; in twenty-six it was loudest to the left of the sternum, in twenty directly over the sternum, in nine at the ensiform, and in one at the apex. While in many instances the accompanying signs of aortic insufficiency obviate mistaken interpretation of the murmur, in some these signs are doubtful, and the diagnosis can only be reached by radioscopy, which shows an enlargement and special conformation of the heart, characteristic of aortic insufficiency. Skoda showed that murmurs are always loudest at the nearest point of the chest wall, and the aortic orifice is actually nearest to this wall beneath the left half of the sternum, at the level of the third or second left insterspace. The cases in which the murmur proved loudest low down are accounted for by the course o fthe aortic infundibulum in relation to the chest wall. The classic aortic murmur, loudest to the right of the sternum, occurs, according to X-ray studies made under the authors' direction, in cases in which the right side of the heart is dilated, the aorta being correspondingly displaced in that direction. This was shown in ten cases. In seventy per cent. of cases with murmur on the left side the aortic lesion was of recent origin—one to five years; in eighty per cent. of cases with the murmur on the right side, it dated back five to thirty years.

A Method of Indirect Blood Transfusion.—Rosenthal (Bulletin de l'Academie de Medicine) describes a simplified method of blood transfusion intended to enlarge the field of the procedure both in civil and military practice. It is based on the view that the mechanical function of transfusion in filling out the vessels of the recipient can be carried out by normal saline solution instead of blood, and that for the additional purpose of hematopoietic stimulation only a relatively small amount of blodo is required. With the customary precautions a short needle of 0.9 millimetre calibre is introduced into a vein of the recumbent recipient by simple puncture or by dissection under novocaine. A receptacle containing 500 to 1,000 c. c. of saline solution is connected with the vein and the saline solution run in under the charge of an assistant. The operator meanwhile deals with the donor, having at his disposal several twenty c. c. glass syringes of the Luer type, sterilized in Carrel's paraffin mixtures, then washed in very hot saline solution. The arm of the donor, lying about a yard from the recipient, with the operator between, is prepared with tincture of iodine. The operator now inserts in a vein, the arm being compressed above by a second assistant, a heavy nickel needle one to two millimetres in diameter fixed to a twenty c. c. syringe, which is then filled in four seconds. The operator now quickly turns to the recipient, the saline infusion having just been stopped, and injects the blood. The procedure of blood transference lasts but ten seconds, and is repeated five times in succession, either with the same syringe washed in saline solution or with a series of syringes.

"Having devoted especial attention to the treatment of chronic diseases, I think I can attribute a large part of what success I have had to the strict attention I have always given to the matter of elimination. A large percentage of such diseases have as a main factor autointoxication and the retention of morbid waste matters nature has failed to expel."

The salicylates have long been regarded by the profession as potent anti-rheumatics, whose efficacy is unapproached by any other known medicine in the treatment of neuralgia, rheumatism, sciatica and other neurotic lesions. Tongaline, from the character of its ingredients, is bound to possess special alterative and eliminative action, with positive affinity for the excretory system of glands, necessarily producing a thorough elimination of the toxic and morbific products of the system through the various emunctories. For rheumatism and gout, sciatica and lumbago ,it is the remedy par excellence; its action being absolutely invaluable.

"I prescribe Tongaline very frequently as a remedy for excess of uric acid, which is often the cause of rheumatism, and it is my sheet anchor for that condition. I also find Tongaline very beneficial in muscular pains, due to a sluggish liver and inactive bowels. When a patient comes to me complaining of soreness all over, I place him upon Tongaline, and it has never disappointed me."

Antiseptic Properties of Acriflavine and Other Dyes.—Browning, Gulbransen and Thornton (British Medical Journal) say that the properties which it is desirable for an antiseptic to possess depend on the uses to which it is to be put. Thus for the disinfection of fluids, excreta, utensils, etc., a rapidly acting substance is desirable and its irritant properties are no tnecessarily disadvantages. For use in infected wounds or in prevention of infection, rapidity of action is not essential and the absence of irritant or destructive action on the tissues or leucocytes is most important. All of the acridine group of compounds are relatively free from such irritant or destructive properties and acriflavine and proflavine especially are devoid of such actions. These two substances, along with brilliant green, are relatively slow in developing their antiseptic actions. The two flavines, unlike all other antiseptics so far tested, are not only not reduced in antiseptic activity by the presence of serum, but are actually decidedly enhanced. When used in wounds both acriflavine and proflavine at first inhibit the growth of bacteria and then later destroy the organisms and do not to any appreciable extent interfere with phagocytosis or act on the wound tissues. For these reasons, combined with their marked degree of antiseptic activity, they are specially suited for use in the disinfection of wounds. For this purpose they should be applied in such way as to permit of their action being continued over periods of many hours; hence should be used on compresses or to saturate wound packing, rather than by one of the methods designed to renew the antiseptic frequently. This is especially true inasmuch as their activity is enhanced by the presence of serum. Brilliant green, on the other hand, is reduced in activity by serum and must be renewed frequently. It is therefore best applied by the approved method of Carrel in 1:2000 solution in water. All three of these antiseptics are little known and their value is not yet appreciated, but their advantages over the substances in common use are so great that their use should be adopted, bearing in mind the most suitable methods of application. It must be remembered, that no antiseptic, however potent, is capable of producing satisfactory therapeutic antisepsis in the presence of heavily infected dead or badly damaged tissues, and for successful results each must be brought into immediate contact with the tissues to be sterilized. Therefore in every case preliminary surgical cleansing of the wound, including the complete removal of foreign bodies and dead or badly contused tissues, is an essential phase in the treatment.

Treatment of Pelvic Varicocele.—Castano (Revista de la Associacion medica Argentina) divides the treatment into medical and surgical. As to medical treatment he advises the prolonged trial of thyroid extract in doses of from thirty to sixty centigrams daily with the addition of iodine, sulphur, calcium, and phosphorus which are found in the normal thyroid. The diet should receive careful attention, with the exclusion of meats, condiments, alcohol, jams, sea food, and coffee. Green vegetables should be freely given together with cereals of all kinds and fruits to prevent intestinal stasis. Rest, mental, physical, and sexual, should be taken and the skin should be stimulated by warm baths and friction with alcohol or aromatic vinegar. Saline laxatives or castor oil in small doses should be given to encourage gentle purgation without causing pelvic congestion. Mamamelis, virburnum, and cannabis indica may be profitably administered as may also be hydrastis. Hemorrhages may be controlled by enemas of plain hot water to which may be added gelatin or laudanum; by vaginal packing, or by rectal suppositories containing belladonna and cannabis indica. Surgical measures are ligature of the veins by laparotomy after the methods of Sencert or Reed or by oophoro-salpingectomy or hysterectomy.

The Recovery From LaGrippe.

Since the first appearance upon our shores of that unwelcome infectious disease known as LaGrippe, the medical journals have been filled with articles advocating different methods of treating the attack itself and its various complications. But little attention, however, has been paid to the important question of how to best treat the convalescent subject. Among all of the acute infections there is probably none that is as likely to leave the patient quite as thoroughly devitalized and generally prostrated, as does a sharp attack of LaGrippe. For some reason the degree of prostration from grippal infection appears to be entirely out of proportion to the severity of the attack itself. This peculiarity renders it advisable and usually necessary to strengthen and support the general vitality of the patient during the period of convales-

cence. Complete rest, nourishing food, plenty of fresh air and stimulation according to indications are, of course, distinctly important measures. At the same time tonic and hematinic medication should not be neglected. Probably the most generally acceptable and efficient general tonic and hemic reconstituent for such patients is Pepto-Mangan (Gudge), a bland, non-irritant and promptly absorbable combination of the organic peptonates of iron and manganese. The efficient blood-builder and reconstructive does not disturb digestion nor induce constipation, and is readily taken by patients of all ages.

Action of Oxide of Tin and of Metallic Tin in Staphylococcic Infections.—Gregoire and Frouin (Bulletin de l'Academie de Medicine) call attention to the observation that among French tin workers furuncular disorders are unknown. Powdered tin has even become a popular remedy for boils. The authors have shown experimentally that metallic tin and the oxide of tin are actually absorbed from the digestive tract, and are innocuous. In experimental staphylococci septicemia, salts of tin proved therapeutically active, and in vitro tin compounds markedly reduced the virulence of staphylococci under certain cultural conditions. Clinically, tin treatment gave prompt and identical results in fifty cases of furunculosis. The boils disappear usually within five to eight days upon ingestion of a mixture of metallic tin and oxide of tin in 0.5 gram doses. An oportunity to test the treatment in acute staphylococcic osteomyelitis has not been obtained, but in two cases of long-standing bone suppuration following wounds the administrationof one gram of the mixture daily resulted in arrest of the suppuration on the twelfth and the sixteenth days, respectively, and recurrence did not follow. Recent tests of the direct introduction of tin in colloidal suspension or in the form of solutions of chloride of tin into wounds infected with staphylococci gave encouragaing results.

I prescribe large quantities of Tongaline for many conditions for which it is particularly indicated, but I obtain especially gratifying results from its use for what are commonly called "colds," the symptoms of which are chills, fever, sneezing, coughing, etc., and for which the system requires, first of all, prompt and thorough elimination.

Transverse Colostomy. — Lockhart-Mummery, in The London Practitioner, gives the following indications for colostomy: 1, as a preliminary to excision of the rectum for cancer; 2, to prolong life and prevent obstruction in cases of inoperable cancer of the lower bowel; 3, in all cases of pericolitis of the lower part of the pelvic colon where resection or short circuiting is impossible; 4, in some cases of intractable ulceration of the rectum; 5, in cases of intractable fibrous stricture of the rectum; 6, as a temporary measure in severe wounds of the rectum. The doctor is of the opinion that while transverse offers certain advantages over sigmoid colostomy, it should not be a routine operation, but that each case should be decided on its merits. It appears to afford better control over the stools than sigmoid colostomy, and prolapse is much less common after the transverse than after the sigmoid operation. In performing transverse colostomy the colon should not be opened at the most dependent part, but as near the splenic flexure as is possible without causing tension. When the transverse colon is short, sigmoid colostomy is to be preferred. The colon should subsequently be cut completely in half to arrest the peristaltic wave at the opening.

A Case of Cyclic Vomiting with Acetonemia.—Weber, in The British Journal of Children's Diseases, cites the case of a girl, aged seven years, who is said to have vomited at birth, and has had recurring attacks of vomiting since, lasting about three or four days, with intervals averaging five weeks between the attacks. The other members of the family—three sisters and four brothers—are not affected. The urine reduced Fehling's solution very slightly, but gave a positive reaction for acetone and diacetic acid. She was treated with sodium bicarbonate, which soon rendered the urine alkaline, but the reaction for diacetic acid was not negative until the fifth day. A second attack occurred about three weeks after she had been discharged from the hospital. This attack was preceded by a feeling of lassitude and sleepiness lasting one day. Six hours after the vomiting commenced the reactions for acetone and diacetic acid were negative. About eight hours after the first uranalysis both reactions were positive. The reactions were not negative until the fourth day. The affection seems to occur more often in girls than in boys, and usually between the ages of two and twelve. It may occur

in more than one child of the same parents. The occurrence of migraine in other members of the family has been noted. It is possible that the mental symptoms—drowsiness and lassitude—mentioned in this case may after puberty become transformed into migrainous attacks. Pyrexia in these cases is not common, the temperature rarely exceeding 100 deg. F.

Surgical Pneumothorax.—Rene Le For (Bulletin de l'Academie de Medecine) says that war surgery has conclusively shown the harmlessness of surgically produced pneumothorax, unless there is severe myocardial disease. If a large opening into the pleura is quickly made, the operation becomes as simple as laparotomy, while if only a small opening is made, difficulties are experienced. With a small opening during the vigorous inspirations, air enters freely into the pleural cavity; the expirations being, on the contrary, performed easily, they are only of short duration and do not give time for all the air to leave the pleura. Hence a relative excess of pressure on that side compresses the lung and impels the mediastinal partition to the sound side. During expiration, moreover, some air from the sound lung enters its fellow, and may force a lobe of the latter against the chest opening, occluding it and instituting a valvular pneumothorax. Conditions are very unfavorable to the early establishment of a respiratory equilibrium, and there is much dyspnea. Where, on the other hand, a large opening is made, the lung on the side opened at once develops free movements during respiration. Such movements may even be so marked as to project the lung out of the chest. This lung therefore takes in air, and the greater the dyspnea the more air taken in, with a resulting favorable effect on oxygenation. Even at the worst, one lung is amply sufficient for this process in subjects with an empty stomach and with muscles relaxed. In none of forty operations thus conducted were there unfavorable effects on the heart or lungs during the operation.

Chronic Cardiac Disease.

The patient with organic heart disease needs constant attention to his digestion and nutrition. A little falling off in the general vitality and the compensatory status of the heart may be lost forever. At the first sign of nutritional decline, therefore, Gray's Glycerine Tonic Comp. should be given. This dependable tonic braces a wavering organism by reinforcing weakened functions. Thus it not only directly contributes to cardiac power, but what is vastly more important, materially reduces the stress under which a feeble heart constantly has to labor. In other words, while increasing the carrying power of the heart, it also decreases the burden.

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Immediate Effect of Cigarette Smoking.—Parkinson and Koefod, in The London Lancet, conducted a series of observations on soldiers between seventeen and thirty-two years of age to determine the immediate effects of smoking. The men were in two groups, one consisting of ten perfectly normal men in military training; the other of twenty men complaining of undue breathlessness, and often also of precordial pain, palpitation,

vertigo, and exhaustion. Observations were made before, during, and after smoking four or five cigarettes in about forty minutes. Observations were made before and after exercise both preceding and following smoking. Demonstrable effects were produced in nine of the ten controls and in all but three of the patients, all three being noninhalers. The average pulse rate rose nine beats in the patients and six in the controls after smoking. No irregularity was observed from smoking. The respiratory rate was not affected in either group, save for some slight reduction in the controls. In both groups the average systolic blood pressure was raised by smoking by about five to ten millimetres Hg. The effects recorded appeared within the first five minutes of smoking and persisted throughout without further increase. Exertion tests showed a higher pulse rate after smoking than before in the patients, and in half of them there was more breathlessness than before. In the controls the pulse rate was about the same following exertion after smoking as before and the respiration was unaffected except in two in whom there was slight increase of breathlessness. While excessive cigarette smoking is not the chief cause of "soldiers' heart" it would seem to be an important accessory factor, according to the authors.

One Divorce Case for Every Three and One-half Marriages.—One divorce case filed for every three and one-half marriages was the average in Indiana during 1916, according to statistics made public in October by Henry A. Roberts, State statistician. Tabulations of reports on the divorce question from all of the ninety-two counties in the State showed that 9,772 divorces were asked of Indiana courts, while 33,522 marriage licenses were issued during the year. The total number of divorces granted was 5,778, and the total number of divorce petitions denied was 2,615. Of the divorces granted, 4,377 were granted to wives and 1,399 to husbands.

On the grounds o fabandonment 773 divorces were granted to wives and 444 to husbands; on statutory grounds 208 divorces were granted to wives and 248 to husbands; on grounds of criminal conviction 94 divorces were granted to wives and 14 to husbands; on grounds of cruel treatment 1,339 divorces were granted to wives and 444 to husbands; on grounds of drunkenness, 434 divorces were granted to wives and only 30 to husbands; on grounds of failure to provide, 700 divorces were granted to wives, and there were no complaining husbands on that score; on grounds of "other causes," 215 divorces were granted to wives and 95 to husbands.

A total of 1,493 divorce cases were filed in Marion county during the year, while 3,958 marriage licenses were issued. Of the divorces filed in this county, 1,092 were granted and 411 were denied or the cases dismissed.—Indianapolis Medical Journal.

Fatigue and Alcohol.—Kent, in The London Lancet, mentions the relation between these two factors with special reference to the question of the more or less continuous and frequently repeated use of alcohol by the industrial class of workers. This industrial form of alcoholism differs considerably from the occasional sprees common to persons in many walks of life and is a very serious problem from both the public health and the economic points of view. His contention is that industrial alcoholism is largely the product of the conditions of life and work in the industries themselves, since it varies in form with the different types of work and affects women much as it does men when the former enter a provocative industry. The chief causative factors seem to be poor living conditions in the factories and the workmen's homes, insufficient time for meals and recreation, too prolonged periods of work without relief, and the deadly monotony of repetition. Of these factors the most important are those of living conditions, specially with reference to wages and the chances for wholesome recreation, for with co-ordinated improvement in these two factors in some works of large size the proportion of alcoholism has fallen remarkably. There is a further element to be considered, namely, that fatigue provokes indulgence in alcohol for the sake of the temporary sense of stimulation which its use gives, and, per contra, the use of alcohol is followed by an increased sense of fatigue after its initial effects have passed off. The chief remedies for industrial alcoholism would seem to be an increase in the wages of the workers, the provision of better home and working conditions, the continued work, and the provision of wholesome sources of recreation and amusement for the workers.

Treatment of Malaria.—Marchoux (Bulletin de l'Academie de medicine) from experience in the treatment of ma-

laria contracted in the Salonica region, believes too much importance has been attached to subcutaneous or intravenous injections of quinnine. A too rapid elimination of the drug occurs after these procedures, especially since freely soluble salts are used. Quinine sulphate acts much more efficiently than the more soluble salts, and alkaloidal quinine even more so. Quinine will not arrest a paroxysm, but when the schizonts are just undergoing division, one grain of quinine may prevent fever. When the schizonts are less mature it is better, to avoid ear symptoms, to give four 0.25 gram cachets in the course of twelve hours, the parasites disappearing in twenty-four to fortiy-eight hours without causing an attack. The sevual forms may cause a recurrent attack two or four weeks later. Rational treatment consists, therefore, in destroying the schizonts as fast as they are produced until the gametes are exhausted. The microscope permits of discovery of the parasites two or three days before the advent of fever, so that they can be destroyed as soon as they appear. Thus it would seem possible to sterilize the organism with only a few grams of quinine. All the patients should be collected in one hospital and their blood examined daily. Those with positive blood examination would receive quinine and be kept at rest, while the remainder could go out and work in the fields. Since the parasites require at least two or three days to multiply sufficiently to cause fever, the patient need be given a gram of quinine on only three days in each week. Suppression of four generations of parasites appears to Marchoux sufficient to sterilize the organism or enable it to overcome the few parasites remaining.

Chloretone as a Hypnotic and Sedative.

Administered internally, Chloretone passes unchanged into the circulation and is deposited in considerable quantities in the cerebral tissue, the patient falling into a profound sleep. Its action is like that of natural fatigue. Hypnosis passes off gradually, and no habit is formed. Acting upon the central nervous system, therapeutic doses have little or no effect upon the heart and respiratory centers.

Chloretone possesses a wide range of therapeutic applicability. It is a valuable sedative in alcoholism, cholera and colic. It is useful in epilepsy, chorea, pertussis, tetanus and other spasmodic affections. It allays, in most cases, the vomiting of pregnancy, gastric ulcer and seasickness. As a sedative and hypnotic it is indicated in acute mania, puerperal mania, periodic mania, senile dementia, agitated melancholia, motor excitement of general paresis, insomnia of pain (as in tabes dorsalis, cancer and trigmenial neuralgia), insomnia of mental strain, insomnia of nervous diseases, etc. In insomnia it is often effective when other drugs have failed.

The therapeutic dose for an adult is ten to fifteen grains. Good results, however, have been had with doses as small as seven and one-half grains. Sleep usually follows in half an hour to one hour. The administration of Chloretone is not attended with digestive disturbances.

Continuous Aspiration in Empyema.—Dauriac (Bulletin de l'Academie de Medicine) after two years' experience with this procedure, applied it with marked success in four cases of traumatic empyema, two due to deep shell wounds of the chest and two bullet wounds. Recovery occurred on an average in two weeks. A rubber tube one and one-half metres long was passed into the most dependent portion of the chest and the margins of the wound drawn together round it or the opening racked with small compresses. The free end of the tube, passed through the dressing, was adapted to the lateral outlet tube of Tuffier's spiral horn shaped device. One and one-half metres above the level of the bed a two litre tank filled with water was placed, and from it the water dripped rapidly through a rubber tube into the horn, producing constantly a vacuum in the lateral outlet of the latter and the pleural tube. The rate of dripping was regulated with a Murphy device and pinch cock. If the apparatus at any time gets out of order, the patient is aware of it at once, becoming somewhat oppressed owing to the fact that the lung is no longer held by negative pressure against the chest wall. The dressings are never soiled, and there is no odor. The previously cachetic patients are very promptly restored to a healthy appearance.

Flies and Bacillary Enteritis.—Nicoll (British Medical Journal) points out that the house fly is not known to be the intermediate host of any organism pathogenic for man or the exclusive specific carrier of any human disease. Nevertheless, a large number of very carefully conducted experiments have shown that the fly is capable of spreading certain pathogenic organisms, especially those producing the various types of bacillary enteri-

tis. These organisms are also not infrequently found in the intestines of flies under natural conditions, but they do not in all probability remain in the fly for more than one or two days at the longest. Practically any other human disease may be spread by flies if it is productive of discharges which carry the infectious organisms. The two most important organisms which may be carried, however, are the Bacillus typhosus and Bacillus paratyphosus, both of which in virulent form may be found in the fly in his natural state.

Fibroid Disease of the Bursae.—Morris (British Medical Journal) reports the case of a man, fifty three years old, who was unable to sit down on account of two painful tumors of his buttocks. On examination it was found that he had a solid mass, about the size of a fetal head, over the tuberosity of each ischium and similar smaller solid masses over both tibial tubercles, both olecranon processes, the third piece of the sacrum, and the ulnar aspect at the base of the left thumb. Except for hemorrhoids the physical examination was negative. Both ischial masses were dense fibromas, firmly attached to the periosteum, and apparently these and all the others, except the one on the thumb, had arisen from the bursae normally present. The etiology of the condition could not be determined and the growths were regarded as primary nonmalignant fibromas.

Camphorated Vaselin Oil—A Warning—The London Medical Lancet says that owing to the fact that liquid vaselin is easier to sterilize than olive oil, certain French pharmacists have been tempted to utilize it in the preparation of camphorated oil. The substitution is not always devoid of consequences. Several instances were recently brought before the Paris Surgical Society of extensive and obstinate indurations which had resulted fro minjections of soi-disant camphorated oil. In every instance inquiry elicited the fact that vaselin oil had been used in the preparation. Histological examination showed the indurations to consiste in the main of inflammatory tissue containing numerous polynuclear cells. Physicians should not be tempted to prescribe, or dispensing chemists to substitute, liquid vaselin oil for the more assimilable vegetable.

Results of Clinical and Experimental Study of Three Hundred Perforating Wounds of the Abdomen.—There has already been given the experimental work carried out by J. Fraser and Hamilton Drummond with reference to this series of cases. In their work on these cases at the hospital the following features were observed and carried out with reference to operative procedures upon the various injured abdominal organs: In wounds of the stomach, while entrance and exit wounds of the body are very similar in size, an exit wound in the thicker musculature of the pylorus is generally larger than the entrance wound and if bile has escaped from the stomach wound the peritonitis is much more severe. Sickness is usually more pronounced than in wounds of the other abdominal viscera, and blood is usually present in the vomitus; while the degree of collapse is less marked than that found in intestinal injuries, whether the small amount of hemorrhage influences this is not known. While the pulse and respiration rate has increased proportionately more rapidly than the pulse rate. Naturally the situation of the wound influences the degree and variety of the symptoms. Pain is more intense when the cardiac and pyloric ends of the stomach are involved, than when the body is the seat of injury; while wounds of the curvature are associated with severe symptoms of collapse, due to the greater amount of destruction of tissue. Again the clinical features are more intense if the injury occurs when there is food in the stomach.

In the treatment, a routine examination of the posterior wall of the stomach should be made, as a wound in this region is apt to be overlooked. Wounds of the cardiac region which are inaccessible for suture may be safely left unless the tear is a large one, since natural healing will occur with little or no leakage.

In wounds of the pelvis, the writers remark how seldom there is a massive escape of contents from the lumen of the gut. Apparently there is a complete inhibition of peristalsis for some time subsequent to the injury. Often when a bullet passes through the pelvis the loop of intestine lying in the path of the bullet will be found riddled with holes over a very limited area. A serious type of injury is when the intestinal contents have escaped between the layers of the mesentery. They have been in cases where the projectile has not actively perforated the gut, but, by passing near it, has exerted

such a force that the gut wall ruptures in that portion which is unsupported by peritoneum—between the layers of the mesentery.

In the operative treatment, there would seem to be very few wounds of the small intestine which do not prove amenable to suture. There are three possible contra-indications to its use: Extensive damage of the mesentery; a wound, which when sutured results in marked narrowing of the gut, which is usually a wound running obliquely across the long axis of the gut; and, when the perforation is associated with resulting necrosis of the surrounding bowel, a condition more common in the colon than in the small intestine. In their suture operations they have not excised the edges of the wound and have used a linen thread for stitching. Where resection is to be done, lateral anastomosis is the favorite method of procedure, and no complications occurred with recovery as the invariable result.

In wounds of the duodenum there is a high mortality before surgical assistance can be rendered, due to the proximity of large and important organs. The injuries usually occur to the second part of the duodenum with an associated wound of the right kidney. Hemorrhage is not generally severe. There is intense shock and sickness is usually present. Operative treatment consists in suture of the torn bowel, with the possibility at the same time of performing a gastroenterostomy.

In wounds of the colon there is effusion which has a tendency to become shut off and localized, more especially in wounds of the ascending or descending colon. Effusion often extends into the retrocolic and retroperitoneal tissues, and is fatal when it occurs. Colon wounds appear to be liable to secondary hemorrhage, due to septic change in the gut, and it generally appears on the third or fourth day after operation.

Because of the localization of the effusion it is a wise procedure to enlarge the original wound in the operation on the possibility that the infection is becoming localized, if the patient is seen longer than twenty-four hours after the injury has occurred. At an earlier period than this it is probably better to open the abdomen through a separate incision. There is danger of overlooking wounds in the colon and the risk is greatest when the wound lies in one or other o fthe flexures of the gut. The actual operative treatment may be summarized in the following methods: (1) Simple suture; (2) suture with a proximal colotomy; (3) colotomy at the site of injury. The operation of resection may be left out of account; it is rarely advisable to practise it in this type of surgery.

All wounds of the colon should receive very thorough local drainage. In wounds of the ascending and the descending colon they have been impressed with the advisability of draining the retrocolic space by a tube passing into the loin. The establishment of efficient local drainage is the means of lessening the likelihood of development of infection of the retrocolic tissue and the establishment of colon septicemia.

Wounds of the rectum open usually through entrance in the buttocks. The most common type is the wound of the anterior of the rectum, low down and immediately above the floor of the pouch of Douglas. The wounds are nearly always complicated by compound fracture of the pelvis or wounds of the small intestine or bladder. There may be much bleeding, but it is unusual to find intestinal contents escaping in any degree, unless the wound is very large. In the early stages the symptoms are ill-defined and easily overlooked. There may be recent hemorrhage from the rectum, retention of urine, or pain near the bladder on micturition.

Treatment demands an exploration of the abdomen. If an intraperitoneal wound exists, it should be sutured with a primary layer of catgut and a series of linen thread Lembert sutures. Temporary colotomy is to be considered. If the wound is extraperitoneal, the entrance wound is opened up and efficient drainage established. In every wound of the rectum it is advisable to open up the entrance wound very thoroughly as it diminishes the risk of a subsequent pelvic cellulitis. Colotomy in this type of wound depends on the character and position of the wound.—British Medical Journal.

I have personally derived great benefit from Tongaline for "colds," taking it on the first appearance of any of the symptoms, and in nearly every instance abort the disease, and I use several bottles of Tongaline myself during the winter months in that way."

Unreconized Congenial Syphilis.—Sabouraud (Presse medicale) divides cases of inherited syphilis into five groups, the last two of which remain unreconized because their characteristics are not fully known to the practioner. The first three comprise the stillborn, those who die within a few years of birth, and those who survive longer, exhibiting such stigmata as dwarfism, cranial of facial deformities, low intellectual capacity, and distinctive cutaneous or special sense lesions. The fourth group exhibits merely oral stigmata, including, besides prognathism, deformity of the upper jaw and approximation of the two superior maxillary bones, such dental defects as eversion or inversion of the teeth, imbrication of two incisors, the growth of a molar from the vault of the palate, complete or partial microdontia, Hutchinson teeth, and, most frequently of all, striated or pock marked teeth—with brownish discoloration of the enamel free depressed areas — together with "screwdriver teeth" and partial loss of enamel about the crowns of the molars, which become irregular in shape and later worn down and flat. Such patients are apt to have a history of numerous and varied diseases in early childhood, to which presumbaly the syphilitic infection may have predisposed. The fifth class, which outnumbers all the others, is that of syphilitic children who are supposed to have completely escaped the paternal taint. It is a mistake to believe that in a family with several children, complete absence of miscarriages implies absence of syphlitic infection. Every depends no the severity of the infection in the father and the treatment he has received before marriage. That a father whose syphilis has been passably treated may have healthy children is a mistaken notion too generally believed in. In all cases where syphilis is known to have existed in the father, and no matter what treatment he has received, a Wasserman test should be made in the children coming under observation—if necessary, under pretense of estimating the urea of the blood, or with some other excuse. If this is systematically done, the appalling extent to which syphilis figures in generalmorbidity will be realized. Mere lack of harmony in the conformation of the body should be held some what suggestive of congential syphilis. Low statue, thin chest, a spinal column with doubtful curves, or a striking ugliness of the face are in themselves of some value as indications of congenital syphilis. Careful attention should then be paid to the cranium, eyes, ears, and teeth. Supplementary ledges on the inner aspects of the upper first molar teeth, recently described by the author, constitue the ultimate trace of syphilis remaining in children whose syphilitic father has received treatment before marriage and believed himself cured. This sign Sabouraud has noted in almost a third of all children recently seen by him. So frequently do ichthyosis, extensive alopecia, psoriasis, prurigo. periauricular eczema of the elbow and popliteal regions coexist with this dental sign and a semipositive Wassermann, that some predisposing relationship of syphilis to these skin affections must be considered probable. Syphilitics as a class must be treated more promptly and thoroughly than has hitherto been the case and must not marry until symptoms have been absent and the serum reaction negative for two or three years without treatment.

The Schick Test in Poliomyelitis, Measles, Scarlet Fever, and in Normal Children.—Using the Schick test on a large number of normal children and scarlet fever patients, Zingher (Amer. Jour. of Dis. of Children, March, 1917) found that, of normal children between the ages of two and four, 32 per cent. show a positive reaction, as compared with about 65 per cent. of scarlet fever patients. With cases of measles between the ages of one and four, only about 10 per cent. more of the children gave a positive reaction than normal children of the same age group. Of 1,350 cases of poliomyelitis between the ages of one and four over 80 per cent. gave a positive reaction. The occurrence of such a preponderance of individuals susceptible to diphtheria among cases of poliomyelitis and scarlet fever suggests one of two possible causes: (1) In these cases there is a destruction of the natural diphtheria antitoxin, a possibility denied by several writers both in the case of measles, scarlet fever and poliomyelitis; (2) a susceptibility to one of the less contagious diseases indicates that the child is also more likely to be susceptible to other contagious and infectious diseases. That is to say, the relatively small proportion of children who suffer fro mpoliomyelitis, a disease only one-fifteenth as infectious as scarlet fever, would be more apt to be susceptible to diphtheria than children suffering from either scarlet fever or measles. Again, since scarlet fever is only about one-

fourth as contagious as measles more scarlet fever than measles patients should give a positive Schick reaction. While with measles, which is almost universally contagious (96 per cent.) there should be only a slightly larger number of cases giving a positive test. The author's results with the Schick test point to the second theory as being correct. In conclusion: (1) the Schick is positive, between one and four years of age, in about 32 per cent. of normal children, in a slightly larger proportion of measles cases, in twice as many cases of scarlet fever, and nearly three times as many cases of poliomyelitis. (2) Susceptibility to one of the less contagious diseases indicates that the child is more apt to be susceptible to other contagious and infectious diseases. (3) Natural immunity reveals problems, capable of partial solution by a study of the Schick test in diphtheria immunity. (4) A uniform technique of making the test, standard solutions of toxin, a uniform interpretation of the test, and a large series of cases are essential in any attempt at making important deductions from the results obtained with the Schick reaction.—Med. Jour. of Australia.

Infiltration Anaesthesia. — Schmidt, writing from a German field hospital, recommends (Muench. Med. Woch.) infiltration anesthesia in certain cases where it is necessary to operate shortly after the receipt of the wound. He advises paravertebral anesthesia by injection into the nerves as thew issue from the spinal cord for operations on the trunk or on the throat, and parasacral anesthesia in operations on the pelvis and on the lower extremities; nerve anesthesia is useful for peripheral parts of the limbs, and also in the form of plexus anesthesia—that is, the injection into the plexuses of nerves supplying the upper or lower extremities. Nerves coming off the spinal cord are to be met with, approximately, in one line which runs from a point 2 cm. from the middle of the neck to a point 3 cm. from the spinous process of the fifth lumbar vertebra. The depth at which the nerve is reached by the point of the needle varies from above downward. The nerve is generally situated from 1 to 1 1-2 cm. in front of the bone when it is touched with the needle. If the anesthetic is merely brought into the neighborhood of the nerve, it diffuses into the nerve in ten or fifteen minutes; 5 c.cm. of a 1 per cent. solution of novocain-suprarenin, freshly made in physiological salt solution, was found to be sufficient for one nerve, but 200 c. cm. could be used without harm, and produced anesthesia lasting from one and a half to two hours.

Analgesia was produced about a quarter of an hour after injection. In order to ensure complete paravertebral anesthesia, 0.01 to 0.02 gram of morphin, or 0.0002 to 0.0004 gram of scopolamin, was injected half an hour or an hour before the injection of the novocain-suprarenin. The point of injection for the sacral nerves was 2 cm. from the middle line on each side of the coccyx. The second, third, and fourth sacral nerves are found by running the finger along the interior of the rectum, while the sacrum is palpated by the point of the needle. Sacral anesthesia was used for amputations of the upper part of thigh and operations on the lower part of the abdomen; 50 to 70 c.cm. of a 1 1-2 per cent. solution of novocain-suprarenin are injected into the spinal canal at the sacrum. This was less frequently employed in field hospital work than paravertebral anesthesia, as unsatisfactory results were more frequent from it, and because it took longer to produce anesthesia—twenty to twenty-five minutes. For operations below the middle of the upper leg the usual peripheral infiltration method of anesthesia was employed with success; 20 c.cm. of a 1 1-2 per cent. solution was injected into the great sciatic nerve, 10 c.cm. into the anterior crural and the obturator nerves. Generally speaking, for operations below the knee-joint only the great sciatic and anterior crural nerves were injected.—Brit. Med. Jour.

The oCnservation of Milk.—The prevention of waste would go far to solve the food problem at the present time, and one of the most promising ways of doing this is by preserving perishable foods. Liuquid foods are specially liable to loss and contamination, and should therefore be desiccated. Methods which in the past have been found wasteful may well now prove to be economical in view of shortage and advanced prices. We shall soon arrive at the period of the year when the maximum output of milk is reached, and the waste of this valuable fluid food material is notorious. Its preservation by concentration with the addition of sugar is already severely handicapped by the shortage of the preservative itself, besides which the milk-syrup so produced is not ideal for general food purposes. Milk, of course, can be concentrated without the addition of sugar, but the prod-

uct cannot be said to be satisfactory, as it is very liable to chemical changes, involving, for example, the precipitation of its milk-sugar and of the calcium salts, chiefly in the form of citrate. The desiccation needs to be carried a step further and the whole of the water removed.

There are two difficulties about the complete drying of milk. The first is that if too high a temperature is employed the constitution of the milk is seriously disturbed; the albumins are coagulated, enzymes are destroyed, the fat is separated, and the resulting powder does not reform an emulsion with anything like the appearance and character of milk. Nevertheless, the product thus obtained possesses a high nutritive value and would save much waste of useful food, particularly in the summer. The water can, however, be easily withdrawn from milk by another process, which consists first in concentrating the fluid at a low temperature in a vacuum pan and then forcing the concentrated milk through a spray producer into a capacious chamber through which flows a current of warmed air. The moisture is thus carried away and a fine dry powder falls, which may be swept out. This product amalgamates perfectly with water, the fluid tasting like fresh milk and having exactly the appearance of the natural emulsion. Moreover, it still shows enzymic activity, the albumins are uncoagulated, the fat is not separated, and caseinnogen is still present in unaltered form.

By whatever process dried milk powders are made one great trouble arises: sooner or later the fat deteriorates, becoming partially rancid, and giving the product. a repulsive flavor and smell Even skim milk, retaining as it invariably does a small proportion of fat, deteriorates in the same way sufficiently to make it distasteful after a time. If this problem could be solved there would be no longer any reason for employing fluid milk at all and an enormous economy of valuable food material would be gained. We could then, so to speak, keep the cow in the larder to be drawn upon exactly as domestic necessity arises. The resulting revolution in the supply and distribution of milk bring substantial gain to the community on many counts.—The London Lancet.

Cancer Problem and the World War.—In discussing this subject, Bainbridge draws the following deductions:

Etiology.—(1) None of the investigations, of either a purely experimental or of a strictly clinical character, have revealed anything concerning the cause of cancer which need give rise to the treatment of the disease.

(2) The laboratory investigations with regard to heredity should be continued, but it is deplorable that, at this stage of knowledge, this possible factor in etiology should be brought to bear in the effort to control cancer in the human subject. The advocacy, on the basis of these findings, of the "eugenic control of matings," has already given rise to vastly more mental suffering than is at all warranted by the facts at hand.

(3) Whatever part soil, diet and other allied factors may play in the cause of cancer, the findings, as published, do not warrant the application of deductions therefrom to the "diet plus regime" method of treating cancer, if this is to exclude the early and radical removal, by surgical means, of the cancer.

(4) The findings with reference to the causative effect of prolonged irritation reinforce the view that it is important, wherever possible, to eliminate this factor by rational means.

Early Diagnosis.—The clinician has been given no reliable aid to diagnosis, in the early stages of cancer, by the continued researches with regard to the various "tests" or "reactions."

Prevention.—The education of the medical profession with reference to the earlier and more accurate diagnosis of precancerous and early malignant lesions, of the layman with regard to the avoidance of the sources of chronic irritation and other factors which may be conducive to the development of this disease, together with a hearty co-operation between physician and layman, are amphasized by continued investigation. No definite means of preventing cancer has been developed.

Treatment.—Nothing has been developed which, in any sense, detracts from the role of surgery in the treatment of cancer. Diet, hygienic regime, anl all adjuvant measures, should be given their proper place as aids, merely, and, in no sense, as substitutes for surgical intervention.—The London Practitioner.

Acute Febrile Polyneuritis.—Holmes (British Medical Journal) describes a form of severe and widespread polyneuritis, occurring acutely and of unknown origin, which he has encountered in private practice and at the front. The onset is generally rapid with malaise or fever and no local manifestations. Then pains

develop in the legs and lower part of the back, usually on the second or third day and persis. Weakness begins in the legs usually a day or so later. The paresis increases rapidly and the upper extremities are soon affected similarly, but less severely. At about the same time the patients complain that their faces are drawn and stiff and there may also be some interference with the power of articulation or swallowing. In the established disease, when fully developed, the symptoms are very characteristic. The lower extremities are equally affected, flabby, without tone, and extensively paralyzed. The paralysis is seldom complete in all groups of muscles and all are often more or less uniformly affected. Muscular atrophy is never marked. The feet are dropped ;there may be no movement possible at the toe and ankle joints, but there is nearly always some at both hip and knee. The arms are similarly but less severely affected, no one movement being totally paralyzed. The trunk muscles are less seriously involved than the arms, though there may be som paresis of the respiratory movements. The deep reflexes are absent, but the superficial ones usually persis. The picture closely resembles a generalized peripheral neuritis of the motor nerves. There is relatively little sensory affection, though some pain may be complained of, especially when the parts are moved. The facial muscles are invariably severely affected from the onset adn there is often much difficulty in eating and drinking, both from facial paresis and from paresis of the pharyngeal muscles. The tongue is not affected and the palate but seldom. The sphincters are usually more or less disturbed. Vasomotor, sensory, and trophic disturbances do not occur. The course of the development of the affection is rapid. Two cases resulted fatally from pulmonary complications, probably aggravated by respiratory paresis. The condition is highly typical and can be differentiated from other forms of polyneuritis with ease.

Effect of Trinitrotoluene on the Blood.—Panton, in The London Lancet, reviews the literature and presents the results of a series of investigations of his own. A group of fifty persons at work with trinitrotoluene was studied to determine the effects of the substance on the blood. It was found that no ill effect was manifest on the red cells and hemoglobin, but, on the contrary, there seemed to be some stimulation of the erythroblastic tissues. There was also an appreciable increase in the numbers of leucocytes, apparently due to a stimulation of the leucoblastic tissues. Some degree of cyanosis was common among the workers and this was found to be due, probably to the production of NO hemoglobin, methemoglobin, or both. Bible pigment was found in an abnormal number of samples of blood serum from the workers and suggested that even in the absence of any symptoms there may have been some damage to the liver. A second group of cases was studied, including those made ill by exposure to T. N. T. Among these toxic jaundice and anemia were the principal troubles. A careful investigation showed that the toxic jaundice was due to a destructive action of the substance on the liver cells and not, as suggested, to an increased hemolysis. In fact the red cells were usually found to be less fragile than normal. The anemia was of a special type, best described as aplastic. The red cells were greatly reduced in numbers, but there was no alteration in their morphology and no abnormal forms appeared. The hemoglobin content of the individual red cells was increased so that there was a high color index. The total leucocytes were also diminished, chiefly at the expense of the granular, neutrophile polynuclears, which fell below ten per cent. in some cases. The anemia was often latent and very slow in developing and in almost every case ran a slowly progressive course to a fatal termination. In some of the cases it was complicated by purpura and hemorrhages from the mucous membranes. Fortunately the occurrence of anemia was rare.

Meningococcic Purpura.—Salanier and Blanchier (Presse Medicale) point out the feasibility of ascertaining by microscopical examination of material obtained from purpuric spots for the diplococci of cerebrospinal meningitis, whether a condition from which a patient is suffering is actually meningitis of the epidemic type. The morphological characteristics of the organisms seem sufficient, under these circumstances, for positive identification. In most instances of meningitis accompanied by purpura a form of meningococcus different from that of the classic type is probably responsible, and correspondingly, in the treatment, the use of a polyvalent serum is indicated.

The Charlotte Medical Journal

Vol. LXXVI CHARLOTTE, N. C., DEC. 1917. No. 6

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. ITS WORK AND NEEDS.

By Benj. K. Hays, M. D., Secretary, Oxford, N. C.

The editor of The Charlotte Medical Journal has kindly offered me the use of these columns to express any message which I may wish to convey to the members of the State Medical Society.

The time has long passed when one needs to make an argument in favor of organized medicine. If the State Medical Society had no other function than that of instructing its members in the recent advances of medical science, the Society would abundantly justify its existence. If its sole function were to inspire its more progressive members to do research work by means of which they could enlighten their fellows, it would still justify its existence. If the Society had no other feature than the social gatherings in which men of congenial tastes and aspirations meet in friendly intercourse year after year, its existence would still be justified. Combining as it does the three functions —instruction, inspiration to research, and social enjoyment—it still has, were this all, no mission greater than that of a society made up of medical men from a given district or section of the nation. But a state organization has obligations and duties far other than these. Medical legislation, whether for the protection of the public against ignorance and dishonesty or for the protection of the profession or in the interest of public health, draws its inspiration and support from the State Medical Society. The Board of Medical Examiners—"the gateway to the profession"—is regulated by the State Society while the code of ethics and the great moral force of public opinion in the profession can be governed by no other organization. The aims and purposes of the profession as a whole are made known through the utterances of the members of the State Society, and these utterances written down, printed and circulated in book form, are not only milestones of our professional progress, through which alone posterity will know of our labors, but they are a sure testimonial that the Society is an organization for the uplift and betterment of all classes of people. Our records give the lie to the charge that the profession is a trust for the oppression of the people or for the exclusion of undesirable members. A study of the transactions makes it clear that the profession is open to all men of good character, education and sufficient medical training to enable them to cope intelligently with disease.

It is a duty which every physician owes to himself and to his patrons to belong to some medical society. Intellectual advancement demands this much. But no matter what other society he may attend good citizenship demands his loyal support of his State Society.

Medical Preparedness.

There is a double reason just at this time why every medical man should give special consideration to the call of his State Society. Many of our members are in the army. Many more will be needed. Many new duties have arisen at home. The ranks of the Society will necessarily be thinned. Among the unusual things to be considered at our next meeting will be how best to furnish our quota of men; how can we serve those who are gone; what is expected of those who remain at home. All of these questions will be discussed by men qualified to speak upon the subject. There will be messages from military and civil authorities which medical men cannot afford to miss. There are duties which the Society owes to the nation. To learn just what these duties are should make every patriotic medical man feel that he must be present.

Organization Means Work.

A great medical society is not suddenly evolved out of chaos. A successful meeting means that someone has thought and planned and worked to bring about that meeting. The more who have done so the better. It is to be hoped that the hotels that are to entertain the Society next April have already laid in a supply of coal and of sugar. But it is of far greater importance that the men who are

to read papers should now decide upon their subjects and that these papers should be written out during the winter. The paper which one intends to write next March will never be written. Doctors are too busy with pneumonia and grip, punctured tires and dirty spark plugs to write papers in late winter or early spring. Now, while the past summer's experiences are fresh in mind is the time to commit them to paper.

Society Dues Now Three Dollars.

War prices have affected the Society's expense account. The 1917 Transactions will cost fully twice as much as the average volume for the past ten years. To meet this extra expense the dues have been changed to three dollars. This was done at the Asheville meeting.

Delayed Transactions.

The time of the appearance of the Transactions is governed by three factors:

(1) The time of the report of the Board of Medical Examiners.

(2) The time allowed for printing by contract with publishers from date of release of copy.

(3) The time required to get proof from writers of papers.

The Board of Medical Examiners meets the last week in June. Their report comes in never later than the fifteenth of July. A printing establishment will contract (except in war times) to bring out the book in sixty days. If these two factors were all it will be seen that the book should appear upon the fifteenth of September. But the third factor is the difficult one to handle. When the proof of papers is sent to the various writers they simply will not return it. It is necessary that these proof sheets be sent out to the writers of papers. It is necessary that the writers read and correct these proofs. But how to make these writers return the proofs is a problem that has not yet been solved. Each year the book appears with a number of papers left out simply because the proofs can not be obtained.

Conduct of Meetings.

There are matters regarding the regulation of the sessions which require careful consideration. Among these are the order of the sections. How many sections shall be running at the same time? If only one the Society must remain in session a week to get through with the papers. If two or more, which shall fall together? Again, how much time must be given to social entertainment? How many "distinguished visitors" are wanted? When shall the house of delegates meet and how shall extra stenographers be provided for them when their meeting overlaps the regular sessions? In the arrangement of the program the question often arises in what section shall a given paper be placed? Which papers shall come together? Which shall be first and which last and how is it possible to keep the men who come toward the last from feeling that they have been slighted? These are not easy matters to decide. They cannot be left to a committee because the program must be arranged some weeks ahead of the meeting and the committee cannot be gotten together. If it be left to the chairmen of sections to have an equitable arrangement it would be necessary to bring the chairmen together which is obviously impossible. Matters like these must be thought out between the times of meetings and decided upon the principle of the greatest good to the greatest number. No possible arrangement can give satisfaction to every one. Meantime the officials of the Society will welcome suggestions from any member who has the good of the organization at heart.

The Soul of the Society.

Younger members often write to me for information about the work of the Society. It is a pleasure to receive such letters. These men want a clearer appreciation of what the Society is, what it stands for and how they can be of service. What they really want, though no one has so expressed it, is to get at the soul of the Society. I will tell how to do it. Get a set of Transactions and read the Presidents' Addresses. These addresses almost always deal with the deeper purposes of the Society. They expose weaknesses and point the way to correction. While all of these addresses are inspiring and each one throws some light upon the peculiar problems of the hour yet there are certain ones that deal with matters that are still living issues.

Like the prophets of old the presidents of the Society have been leaders in thought and in action. Many public institutions long ago seen by them in prophetic vision have now become realities. Did their advocacy bring these institutions into being? One cannot say. But this can be said—that every great humanitarian movement that has taken

place within the state during the last half century was for the first time publicly advocated upon the floors of the State Medical Society. More than that, the medical profession in the State has taken no step forward until that step has first been urged by one or more Society presidents in an annual address.

The organization of the board of medical examiners and the passage of State laws requiring every practitioner of medicine to obtain license from this board was the work of the last generation.

In 1903 President A. W. Knox advocated the reorganization of the Society while in the following year President H. B. Weaver pointed out the necessity for a closer affiliation with the State Board of Health. President S. D. Booth (1907), and President J. F. Highsmith (1909), each made a plea for state aid in the fight against tuberculosis. President C. M. Van Pool (1911), voiced the need of better preliminary education for the medical novitiate. Dr. Edward C. Register, president 1906, also voiced the need of better preliminary education for the medical student, and President A. A. Kent (1912), dealt with the relationship of the Profession to the State. President D. T. Tayloe (1905), advocated the building of private hospitals and President H. M. Fletcher (1916), the building of county hospitals while President J. P. Monroe (1913), and President J. M. Parrott (1914), each dealt with almost every phase of public health work and with the duties of individual physicians regarding the entire movement. President L. B. McBrayer (1915), also dealt with various public health matters and he did something which apparently no man had dared to do before. With a bold hand he waded into the question of "politics in the Society." If any man has a desire to engage in Society politics, or if he is disposed to criticise those who do have such a desire, let him read this address and conform to its teachings. We will then hear no more of "politics in the Society."

History of the Society.

An organization can be understood only in the light of its development. The story of its creation, early struggles, failures and successes is always of interest. The same problems must be faced again and again. The early history of the State Medical Society has been written once and for all time by Pres. J. Howell Way. It was the subject of his address in 1908. The younger member who wishes to be of service to the Society, to the Profession and to the State will here find a lesson which he cannot afford to let go unlearned.

Dr. J. W. Long (1917), gave an illustrated biographical lecture which can be read with profit in connection with the above.

Dr. H. A. Royster has also written biographical sketches of certain medical men of this State and these should be read while the spirit of hero worship is still upon you and before you have forgotten your high resolve to become worthy successors of these loyal members of the State Medical Society.

I cannot refrain just here from going outside the State Society to mention one of the most inspiring medical papers ever produced by a North Carolinian. It is the presidential address delivered by Dr. E. C. Register before the Tri-State Medical Society (1915). The subject was "The Advantages of Medical Associations." It is the best presentation of the subject that has fallen into my hands.

IS AMERICAN JUNKERISM THE SOLE CAUSE OF OUR UNIVERSAL POVERTY AND THREATENED STARVATION DUE TO ECONOMIC BONDAGE? PHYSICIAN'S DUTY.

By George H. Tichenor, Jr., A. B., M. D., Associate Editor Western Medical Times; Member American Medical Editors' Association, New Orleans.

Introduction Junker System of Autocracy.

The system of autocracy adopted by the Junker for the purpose of ruling the German people differs but little from that of other methods of the autocracies of the past and present. Autocracy can exist, flourish and dominate the masses just as well under a Republican or Democratic form of government as in a kingdom or empire, provided laws do not exist which effectually control and prevent its formation. Control of wealth, education, the press, religion, and regulation of the professions are the cornerstones in all autocratic structures.

Aim of the Founders of Our Republic.

Realizing the importance of these factors, the founders of our Republic with studious care proclaimed the right of ev-

ery individual to enjoy the fruits of his own labor provided in doing so he did not prevent others from doing likewise, freedom of the press, right of peaceful public assemblage as expressed in the Constitution of these United States.

They even did more, realizing by experience that the threads of autocracy in various nations might be drawn into one autocratic woof at some future time, they advised future generations "to form no entangling alliances" with Europe's autocracies and later proclaimed the Monroe Doctrine in order to make the "American continent safe for Democracy." To further safeguard these doctrines and knowing the curse of militarism had been to Europe, limitation and disarmiment was aimed at in limiting our military department.

Our Political History is a Record of Endeavors to Maintain or Defeat the Ideas of the Founders.

The political history of the United States up to the present shows a continual agitation among our statesmen as to the special form or laws that should be enacted to carry out or defeat the ideas of the founders.

As to whether these ideas have been carried out or defeated in part or wholly is the object of this article and to encourage the physician to do his patriotic duty in seeing that the Ship of State which was partly launched by doctors is not wrecked or diverted in its prescribed course towards the port of universal freedom. In making the "world safe for democracy let us not lose sight of the most important factor, freeing America now and forever of its curse, autocracy.

The unfortunate condition that has existed in our country since 1776, is the fact that our forefathers gained only an independence as to form of government, while autocracy still held a certain grip on the throats of the masses, Congress, the people's voice, had the right to be heard and enact laws, but the Supreme Court could say whether it would let them enforce the people's will.

Many students of American social development today seem to be the opinion that quasi-public rights which have been created by the courts and zealously upheld by the Supreme Court of the United States, form a fog of confusion in our law behind which rascality hides and from which all civic uprighteousness can be traced.

Confusion in Our Law Between Private and Public Rights.

A clear clearage in our law between public and private rights, the principle oringinated by Sid Mathew Hale, one hundred years ago, and which some seem to think has been disregarded by the courts in late years in their over-zealous endeavor to uphold property rights, should receive earnest investigation.

Absurdity of Money Fines Instead of Jail Sentences.

The punishment of misdemeanors and some of the most atrocious crimes against society by money fines instead of penitentiary judgments are a fruitful source and aid for the development of autocracy. Crimes against society such as those committed by price riggers, food hoarders, etc., should be only jail sentences. In fact, we should do away entirely with money fines, and substitute jail sentences for all offenses. In some instances where the monopolist is fined a money indemnity, the people pay the penalty by the culprit raising the price of the commodity he controls.

It does not stop even here. He often avoids taxation which is levied on the commodities he controls by raising the price, the people paying the tax thereby.

Economic Condition. Competition Impossible. Big Fish Have Eaten Up Nearly All the Minnows. Proof.

This condition has existed so long that today we have arrived at a condition in our country where the masses are starving amid plenty, where but one person in twenty in the United States has a bank account although the per capita wealth is the greatest on earth and the aggregate wealth is two-fifths of all the wealth of the world, and worst of all, the **income tax returns shows competition no longer possible.**

A comparison of the federal income tax returns for 1914 and 1915 brings to light the interesting fact that the number of Americans with modest incomes are decreasing, while those with incomes of $100,000 and over are on the increase and although $26,897,000 more was collected in 1915 than in 1914, the number of persons paying the tax fell off 20,863. In other words, American finance is like the gambler's game of Kino, the "banker" eventually gets all. This is corroborated by the fact that 87 business concerns out of 100 fail, 82 people out of 100 die leav-

ing no tangible assets according to court records, and statistics will show that within the first six months of 1916 more retail grocers have gone to the wall than in any three years together within the past ten—impossible competition.

Money in the Possession of a Few Greatly Increased by World War.

Before the world war began, two per cent. of the people owned 60 per cent. of the nation's wealth, sixty-five per cent. of the people lived on less than five per cent. of the country's wealth. Today, we read of estimates of war profits that run as high as four billions of dollars per pear. What next?

English Idea of Conscription of Wealth.

As the world war goes on, the idea of conmpulsory service or conscription tends to grow. Now it seems that it is seriously proposed in England that at the end of the war a large part of the great debt of England will be wiped out by direct conscription of wealth. Australia avoided economic bondage by limiting the amount of wealth a corporation can do business with in the confines of its continent, so as to allow competition and from all accounts seems to have fared well so far as the welfare of the masses are concerned.

Peculiar Ethics Which Admits Conscription of Body but Not of Wealth.

We all recognize the moral rights and proper incentive to allow the individual the right to accumulate honestly provided his accumulations do not reach the point where competition is impossible and the vast accumulated wealth becomes a power the State must reckon with. When a man has accumulated his wealth to the point that he has all that is necessary to satisfy the normal desires of his family, he should be compelled by the State to withdraw from business and give some one else a chance to make a living.

It was the fundamental idea of the founders of our Republic to allow the individual the enjoyment of the fruits of his labor provided in so doing he did not prevent others from doing likewise.

American "Mich Und Gott" Junkers.

I believe the founders would turn in their graves at the sight of such conditions as now exist. I own all the salt, fix the price, nobody can get it unless I say so and at my price, I have system and efficiency. In a word, a perfect working government of my own, the press to educate the people the way I want them to think, schools and professors to teach the rising generation, legislators to make my laws—what right has any one to interfere. I am so highly endowed that if all the people had an equal show, I would get all the salt—in fact it's "Mich und Gott" (I and God), and furthermore I don't care a rip about your fines. I usually spent that amount on a summer outing—this seems to be the prevailing spirit of the day.

Confine Money Maniacs.

Doctor (teacher), I suggest that you consider the following as a remedy to the "Mich under Gott" money maniacs whose daughters and sons not content with American possessions have in many instances married German, French, English, and I suppose, Hottentots if they possesser wealth (power) enough in an insatiate desire to rule mankind. While we are getting rid of the German Junker, let us for heaven sake do not give his wealth (power) to another bunch even though he be of the American variety.

Some Things Necessary if We Are To Have a World Free of Autocracy.

(1) Limit the amount of individual wealth (power) and compel retirement from business and political office when the possessor obtains that amount.

(2) Woman suffrage. Let us have at home the Democracy desired for others.

(3) Abolition of money fines and jail sentences instead for all misdemeanors and crimes.

(4) Government control of necessities, natural resources, oil, coal, etc.

() Government supervision of all schools and education.

(6) Freedom of the press and penitentiary offense for any publisher who carries on a propaganda for the benefit of any corporation whose operation would be to the detriment of the moral, physical, educational, or financial interest of the public. Let the slogan "Let me own the town paper and I run things to suit myself" die a quick death. We don't want it even insinuated again on the floors of Congress that there are 26 leading dominated newspapers in the United States.

(7) Referendum in regard to vital issues and recall with jail sentences for the fellow who fails to endeavor to carry out his platform.

(8) Minimum wage based upon the purchasing power in necessities estab-

lished by a federal bureau for unskilled labor so as to establish a basis for discovering the value of all labor and the purchasing power of currency. Jail sentences to employers to pay such labor less than a living wage which could be determined somewhat after the manner of our soldiers' pay and rations.

(9) Compulsory education along lines of personal aptitude.

(10) Social insurance, old age pensions, employer liability, etc.

(11) Universal disarmament to the extent of leaving only that amount necessary for police duties for international policy.

(12) Prohibiting foreign corporations from doing business in this country who have a larger capitalization than that required by our laws in limiting wealth (power).

These are a few things I believe are essential, if autocracy is to be eliminated. An autocrat, under present conditions, can use his power (wealth) whereever he choses merely by investing his money and when an autocrat's son of one nation marries an autocrat's daughter of another nationality, international trouble is likely at any time, if supported by successful propaganda by the press. Yours in the cause of "making the world free for Democracy."

VARICOSE VEINS.

By John B. Haskins, Chattanooga, Tenn.

Varicose veins indicate a chronic dilation of the veins. The most commonly affected are the hemorrhoidal, the spermatic and long saphenous. We shall confine our remarks to varicosity of the limbs.

For all practical purposes a varicose vein in the lower extremities may be described as merely a valveless vein or, more properly, a vein whose valves are incompetent. The most obvious cause of the breaking down of the valves, according to Homans, is hard work, such as carrying or lifting heavy loads for long periods, as in the case of longshoremen, freight-handlers, and laborers. The occupations, which involve standing for long periods without moving the legs are in a lesser degree ,a source of valvular incompetence, and this not from excessive back pressure, but from stasis due to lack of muscular movement.

*Read before the East Tennessee Medical Association.

Summarizing the principal physiologic and anatomic features of the venous circulation in the legs, Homans (Surg., Gynec. and Obst., February, 1916), writes: "The veins pass the blood upward through a series of chambers separated by bicuspid valves set to permit only an upward flow; this flow is favored by movements of the leg muscles assisted by the forces in the thorax which tend to empty the vena cava, and by the push of the capillary circulation; the walls of the veins must support a column of blood whose height is measured by the distance to the heart above, and in as much as the abdominal veins are valveless, the pressure upon the upper valve, or upon the vessel-walls below it if this valve becomes incompetent, may be enormously heightened by increase in intra-abdominal tension; the deep veins of the legs have a strong muscular support outside their own walls, while the surface veins derive an adventitious support only from the superficial fat and skin; a system of vessels perforating the deep fascia communicates between the two, and, owing to the arrangement of its valves, lightens to some extent the work of the latter.

"It is a very general rule, if not a law, that the more prominent and tortuous the surface veins, the simpler the cure; the less noticeable the surface veins, the more radical the operative procedure required for cure.

The condition usually occurs in the middle decade of life although I have observed several patients who were under twenty-five years of age. The ratio of male and female in a large series of cases as compiled at the Mayo clinic was three to one.

Pelvic tumors, diseases of the heart and operations on the extremities are rare causes of varicose veins.

Variable changes of the skin occur in practically all cases of varicose veins. Often the skin, particularly above the ankle is shiny and has characteristic thin, pale translucent appearance. If the condition is not relieved the skin will frequently become hard and has a tendency to adhere to the subcutaneous connective tissue, and the chronic hyperemia sets up a pigmentation which in long-standing cases becomes dark red-brown in color. The skin is exceedingly prone to become eczematous; the surface varies from moist to the dry scally type.

The frequent association of chronic ulcer is well known. In a large number of cases observed in the Mayo Clinic 40 per cent. had ulcers on one or both legs.

These ulcers occur on any part of the leg below the knee. The most common situation being on the inner and anterior aspect just above the internal malleolus. The chronic congestion of the skin and subcutaneous tissue is a strong predisposing factor to the formation of the ulcer; and a slight injury may be sufficient to produce a lesion very resistent to healthy healing. If these ulcers are neglected, as is so often the case in laborers, they increase to a great size, occasionally almost encircling the limb. They are also subject to malignant degeneration. Pain associated with the varix is a common symptom. This may be marked even in cases where the varicosity is not extreme.

In selecting cases for operation, a large percentage of patients presenting themselves for treatment are suitable for operation, but nevertheless, careful selection is necessary. With few exceptions, when it can be demonstrated that the deeper veins are competent to readily return all the venous blood, even though it is undoubtedly true they are involved in the same process in a considerable percentage of cases, the removal or ligation of the superficial veins is indicated. The simpler and efficient test proposed by C. H. Mayo some years ago is of great value. If the patient can be relieved, or made fairly comfortable, by the use of a well-fitting elastic stocking, the removal of the superficial veins will usually be followed by good results. Chronic ulcerations, neuralgia, and recurring attacks of phlebitis with thrombosis are further indications for operation. Cases in which the trunks of the veins stood out prominently and the stasis was well marked have given the best results following operation, while failures have occurred when operation had been undertaken in cases in which a general phlebitis had inaugurated a permanent edema with little evident enlargement of the veins. Cases following typhoid, and those associated with great dilation of the internal and external saphenous and of the suprapubic veins are among the types most undesirable for operation.

Preoperative treatment is sometimes advisable, particularly if there is extensive ulceration, or in cases of recent phlebitis where redness and pain, marking local thrombosis, still exist along the course of the vein. If such patients are put to bed for a few days, with elevation of the feet ,the post-operative convalescence will be shortened and a good end-result more probable.

Operation—Many procedures have been devised for the surgical treatment of varicose veins. They vary from simple ligation (Trendelenburg, 1891), to total excision (Madelung, 1884), or to anastomosis between the saphenous and femoral (Delbet, 1906). The procedure advocated by Schede (1877), namely, division of the veins between ligatures, is still probably the most valuable when the vein cannot readily be removed.

It is generally accepted, and proved by results, that the subcutaneous extirpation of the long saphenous is the most practical and effectual method of dealing with the condition. The procedure introduced by C. H. Mayo, in 1900, of stripping the vein by means of a metal ring on a carrier about twelve or fourteen inches long, has proved a boon in simplifying the operative treatment of varicose veins. Modifications of this instrument, namely, that of Babcock, have been used with success. The stripper may be tried in all cases. The operation is conducted as follows:

The long saphenous vein is isolated and divided near the saphenous opening, and the proximal end ligated. The distal end is then mobilized as much as possible by means of a long artery forceps of the Murphy type, and the ring of the stripper introduced over the end of the vein. By means of combined gentle traction on the vein with forceps moderate forcing of the instrument along its course and with the spin supported by the spread-out hands of an assistant, being particularly careful when the larger branches of the saphenous are encountered, it is possible in most instances to strip the vein down the entire length of the instrument. By forcibly pressing the ring outward against the skin and incising carefully on it, the vein can be picked up and brought out through the first incision. The vein can then be re-threaded on the stripper, and can often be stripped down to one or two inches below the knee where, however, the main trunk has decreased in size so that the stripping process cannot be continued without breaking the vein.

It occasionally happens, that the saphenous breaks high up, the stripper is discarded, and the trunk picked up through a small incision in the lower third of the thigh, and there ligated. The stripper rarely works well below the knee, and where it doesn't a partial Schede operation for the ligation of the veins of the calf of the leg is performed. A spiral incision, extending from the

point close to the anterior border of the tibia continued backward and downward to a point about the middle of the calf, divides all the branches of the long saphenous at this level, and gives an opportunity to dissect out any masses of thrombotic or greatly dilated veins, with the overlying skin, if necessary. Having cut these veins between forceps, the second incision is made about three inches above the internal malleolus and of sufficient length to pick up all the superficial venous branches in that vicinity.

In cases complicated by ulcer and in which the patient has not been kept in bed long enough for the ulcer to heal, local surgical treatment is indicated. Ochsner's method, a series of short incisions close to and paralleling the margin of the ulcer and encircling it, is most valuable. Skin-grafting is rarely necessary.

The causes of failures are due as a rule to improper selection of cases more often to incomplete operation, or lack of care in after-treatment. A serious complication occurring with some frequency in the long-standing cases is, that the chronic congestion and disability incident to ulcer formation undoubtedly predispose these patients to flat-foot, and the breaking down of the plantar arch is associated with the familiar pain common to this deformity. The removal of varicose veins in such cases may be successful to the extent of getting rid of the veins, but the expected relief from pain is, of course, not derived.

The operative technic and the post-operative treatment are of importance. The incisions are covered with plain gauze held by strips of adhesive and the limb, including the ankle, firmly bandaged. Dr. C. H. Mayo says that the following is advisable—slight elevation while in bed and the patient not allowed to be on their feet until they are equipped with elastic bandages, which they have been taught to apply. These are used according to the demands of the individual case, from six weeks to six months.

HAY FEVER—A NEW CURE.

By Thomas P. Miller, M. D., Knoxville, Tenn.

Hay fever is so well known and so many people suffer from it that it is put on the front page of the newspaper by the cartoonist, and there are organizations known as "Hay Fever Clubs." It is treated with less satisfaction to the patient and more cures from the doctor's standpoint than any of the common maladies.

It is truly known to be a hyperesthetic condition of the nose and a volume of portable size would hardly hold all the different treatments that have been tried or suggested. The mails are full of literature advocating different treatments, all of these reporting so many so-called cures, but there has never been a specific cure for hay fever that I have been able to find. Some authorities have said to select the serum to use by scarifying the arm at different places and at different times apply different serum. The one producing the greatest re-action is the one to use. Other authorities have said that hay fever was a constitutional disease and caused by uric acid. For this a half teaspoonful of soda three times a day was prescribed. I had a patient once that cut this out of the paper and took it--but I could not see that it had helped him one bit.

One house reports a large percent of cures with its serum and says those that were not cured by its serum, had some mal-formation; and personally, I have found all cases of hay fever to either be a malformation or a very close nose.

There is a condition in all cases of hay fever, of highly sensitized parts of the mucus membrane supplied by the olfactory nerve. This is caused in all cases I have seen, by a malformation of the nose. This malformation can either be an enlarged Superior Turbinate—a deviated Septum, or a very close nose. At any rate there is a pressure between the superior Turbinates and the Septum, causing a highly inflamed and sensitized condition of the mucus membrane at the ramifications of the olfactory nerve.

I have had people tell me that they have seen people suffer from hay fever that had a very large and open nose. That is so. I have seen numbers of patients who had the inferior Turbinates removed long before and had a perfect breathing space—but in the roof of the nose, in the great plexus of the Olfactory Tract—are the superior Turbinates—tightly wedged in against the Septum, congested and highly sensitized—and they are the ones that have hay fever.

It is not so very easy to see this part of the nose, Ordinarily one looks along the respiratory tract—and if that is open—it is passed up as a perfect nose, but I venture to say that any patient suffering from hay fever—has a congested condition of this special part of the nose supplied by the Olfactory Nerve—and

that this congested condition is caused by a malformation of some kind that makes two surfaces of mucus membrane rub together.

The same people live in the same climate, breather the same air—eat the same food and do the same things: yet some have hay fever—and some do not. The reason is that some have this condition I have spoken of—and some do not. This condition does not interfere with respiration in the least, nor does it interfere with the external appearance of the nose—but these people pay dearly for it when hay fever season appears.

I mean by that, this inflamed and sensitized condition of the upper part of the nose is there all the time—some are so bad they sneeze and have this trouble all the year through. Some—and I might say the majority—are not so bad and only have this fit of sneezing when the polen is liberated from the vegetation.

Treatment.

There has been a great deal said recently of different treatments for hay fever by the use of serum, made from different bacteria and different polens. I have used them—always accompanying the hypodermic with local treatment in the nose. Have even used autoginous vaccine—and find that it has the same ecect that influenza bacterin has on a cold. You keep up the treatment until the season is over and your patient gets well—but next season you have the same thing.

From reports just gotten over the phone from a patient I had five years ago with hay fever—there has been no return whatever of the trouble—and this patient says: "In addition to that doctor, I have not had a cold anything like as much as I used to."

But I say, gentlemen, after trying all of these various treatments, and getting no permanent results from any of them—that hay fever is strictly a local, highly sensitized condition of the upper part of the nose supplied by the Olfactory nerve. I have a picture of the side of the nose here—showing all the different nerves, and I would call your attention particularly to the Olfactory nerve and its branches. It has branches equally distributed under the mucus membrane of both the Septum and Superior Turbinates, so you can easily relieve a pressure there without destroying the sense of smell. I have seen the sense of smell destroyed by a severe blow on the head, rupturing the Olfactory nerves as they pass through the Cribriform plate of the ethmoid bone, but have never seen it done by removing enough of the parts to relieve a constant irritation at the periferal endings of the Olfactory Nerve.

If you have an enlarged Superior Turbinate—reduce it sub-mucously—and you will not be obliged to remove both groups of nerves from both the Turbinates and the Septum; and if this is reduced properly—submucously — your nerves will not be destroyed.

One case I wish to report, of a woman about 45 years old, had suffered until she was badly emaciated and unable to perform her household duties. She had tried all the treatments she had ever heard of, and gotten no relief whatever. When she first came to me, she would not listen to anything pertaining to surgery, but finally succumbed to my advice. I reduced the parts of her nose causing the trouble and she has had absolutely no return of her trouble. That was four years ago.

Another case; a prominent attorney of my town; had both inferior Turbinates removed several years ago; had a perfect breathing space and would not believe any further destruction of the mucus membrane of the nose was indicated. After treating him for some time, he allowed me to reduce the pressure, and has passed two seasons without an attack. (Says he is sorry he didn't know me sooner).

Another patient I had recently, told me that he was a great sufferer from hay fever years ago, but sprayed his nose with adrenalin chloride for several years, and now he is never troubled with hay fever. From what this man told me, gentlemen, I inferred, he used this adrenalin chloride for such a length of time as to atrophy the mucus sufficiently to relieve this hypertrophied condition—and obtained the same results as by the different methods I advocate.

The disadvantage in this method as you all know is, first—the length of time required to accomplish the desired effect; second, the uncertainty of what you may do by turning a spray of adrenalin chloride into your nose to effect all parts thereof for several years.

I would do this operation either with a cutting instrument of the desired shape and size—or with an electric cautery—or if the nose would permit, the desired effect can be had by the proper application of tri-chloro-acetic acid. The method used must be selected by the surgeon af-

ter examining the nose. By the proper use of one or the other of these with a patient who really has hay fever—you will have a patient who will feel an eternal debt of gratitude towards you.

THE IMPORTANCE OF EARLY TREATMENT OF CHRONIC HYPERTROPHIC, OTITIS MEDIA—REPORT OF A CASE.

By L. Herbert Lanier, M. D., Texarkana, Tex.

The two main types of chronic middle-ear catarrh are: Chronic Hypertropic Otitis Media and Chronic Hyperplastic Otitis Media, or dry Catarrh, they probably in most cases represent different stages of the same disease, or that one is sequel to the other, now whether it be true or not that they in some cases represent the gradual conversion of a simple exudative inflammation into a hyperplastic condition in which the normal tissue elements, are to a considerable extent replaced by new connective tissue, and in others originate independently as separate lesions from their incipiency, there can be no mistake about them having a different pathologic basis, and also differing in their response to treatment.

In chronic hypertrophic Otitis media, a chronic exudative inflammation of the eustachian tube and typanum causes the lining membrane of both to be greatly thickened and the calibre of the tube reduced, with resulting impairment of hearing.

In young children diseased lymphoid tissue in the vault of the pharynx is the most prolific source, not only of acute and subacute catarrhal middle-ear disease.

Often intranasal disease and deformities, or affections of the pharynx and fauces, serve as the primary factor in the development of this condition.

Chronic affections of the nose and nasopharynx extending to the middle-ear through the eustachain tube, adenoid vegetations in the vault of the pharynx, hyperplasia and bony enlargement of the turbinal bones, deflections of the nasal septum, chronic pharyngitis. All of which render the nose and nasopharynx liable to frequent attacks of acute inflammation with or without marked infection, tend to produce tubal obstruction, materially affects the tympanic cavity and by producing improper aeration of the cavity, materially aids in the development of tissue changes there.

The development of the disease is slow and insidious, and until some marked symptom such as Tinnitus or an appreciable deafness appears, patients may be unaware of its existence, tinnitus may become constant and evoke great discomfort and nervous depression, deafness may be either unilateral or bilateral during the early stages, but eventually both ears succumb to the catarrhal process.

At any stage the deafness is aggravated by physical exhaustion, worry, damp weather, and the impairment of the general health, patients usually hear better and feel freer from their symptoms during clear, dry, than during moist, humid weather.

In the acute and subacute stages of the disease, tinnitus often indicates an obstruction of the eustachain tube of sufficient density to demand energetic measures of relief, this refers to strictures and adhesions, and these conditions are far too often neglected, even by some of our best Aurist because as yet we have not sufficiently educated the sufferers of this disease, in the importance of early and continuous treatment to prevent the incurable symptoms arising from the severer chronic form of it, proper medication through the tubes, and where necessary the proper use of probes and bougies will accomplish wonders in these cases.

In chronic middle-ear catarrh an Otoscopic picture will show retraction and sclerosis of the membrana tympani with occasional atrophic areas, changes in the character and position of the light reflex, and occasionally calcareous deposits, the vertigo, if any is usually slight in this disease.

The disease should be differentiated from Otosclerosis an affection characterized by progressive deafness, and without catarrhal symptoms.

Affections of the labrynth differ from chronic catarrhal Otitis media in the characteristic symptoms of vertigo and deep-seated tinnitus and in loss of the bone conduction of sound.

Timely institution of rational treatment in the earlier stages renders the prognosis more favorable the return of normal or nearly normal hearing may be expected after restoration, of normal conditions in the nose and nasopharynx, as a result of removal of diseased lymphoid tissue from the pharyngeal vault of diseased or hypertrophied tubinate bones or deflected septa, the radical treatment of

suppurating accessory sinuses and by the maintenance of normal tubal conditions.

In the simpler forms of eustachian catarrh intranasal treatment alone will suffice to effect a cure, but when the disease has been long continued and infiltration with thickening of the membranous lining and consequent diminishing of the calibre of the tube occurs, much may be accomplished by simple inflation, the use of the catheter, or the introduction through the catheter of vaporized medication or superheated air, catheterization and the introduction of medicated vapors, remains the two most effective methods of procedure, the employment of, camphor, menthol and iodine equal parts by means of the Dench Vaporizer is very effective.

In cases of tubal obstruction I am a strong advocate of the employment of the eustachian bougie, the relief of tinnitus and increase in hearing which follows the introduction of the bougie is gratifying, I have patients that appear at regular intervals for the bougie treatment, claiming to receive much benefit from it. I use the whalebone bougie, as much as possible, but find Yankauers probes best in some cases. I have in recent months found that a probe made of catgut, made by Dr. Koehler of Minneapolis is very serviceable and well adapted to many obstinate cases.

Otomassage has some merit in the treatment of this disease, it is employed to prevent adhesions and to break down those already formed, and to relieve tinnitus, vibratory massage relieves tension and produces a marked soothing effect upon the nerves of those who are depressed and despondent.

In desperate cases operative measures are occasionally resorted to in order to relieve the adhesions and improve the hearing.

In desperate cases operative measures are occasionally resorted to in order to relieve the adhesions and improve the hearing.

Case Report.—White; male; age 58, has suffered for 6 years with catarrh nose, and naso pharynx, hearing has gradually grown worse for 4 years; first had treatment for catarrh one and one-half years ago; first had ears treated one year ago. Subject to frequent colds, which are always followed by almost complete deafness, no pain any where in head, tinnitus, very annoying half of the time, some every night, sufficient to prevent sleep. Extremely neurasthenic, and despondent, forced to quit work one year ago, and was treated in north for one year before coming to me.

I found the eustachian tubes almost completely closed, marked retraction of drumheads and at orifice of right eustachian tube two small lymphoid growths, obstructing its mouth, also a badly deflected nasal septum.

I first did a submucous resection of the nasal septum, then removed the lymphoid tissue at orifice of right tube, cauterized enlarged turbinates, and after a few days started treating eustachian tubes, as follows: Would first wash out nose and naso pharynx and around orifice of tubes with alkaline solution, then apply cocaine two per cent. solution, followed by argyrol one per cent. solution, then I would catheterize the tubes and use probes to dilate the tubes before inflation. I found the tubes so constricted that repeated trials were necessary at each sitting to reach the typanum, only the smallest of Yankauers set would pass and many trials were made with the gum elastic, celuloid and whalebone, requiring the smallest of each. Upon withdrawal I would use the Dench inflator, which happily is constructed so that medicated vapors may reach the middle ear, for this I used equal parts of menthol, camphor and iodine.

I heard of Dr. Koehler's catgut probes, and that he claimed they were superior to all others, in being porous enough to carry sufficient medicine to the tubes to do some good. I wrote Dr. Koehler, and obtained some of his probes, and followed his direction and the results in several obstinate cases has been very gratifying, the following is an extract from a letter of Dr. Koehler to me:

"In regard to the probes we make, I have found them the most satisfactory, as with our process of hardening we make them stiff enough to mechanically open the ear while the catgut we use is porous enough to carry a sufficient amount of the solution to really do some good, applied to the tube. I used a saturated solution of nitrate of silver in a eighty-five or ninety per cent. of alcohol. The probes are dipped after cleaning and the silver solution is left to dry on the probe. During treatment we try to introduce the probe as rapidly as possible, letting it remain for five to ten seconds, withdrawing it with a twisting motion, endeavoring to apply the silver uniformly along the tube. The objection that we have to probes of hard texture such as celuloid and whalebone, is that there is too much

danger of injury, and they are not porous enough to hold a sufficient amount of silver to do much good."

THE LABORATORY AS A HELP IN DIAGNOSIS.

By Dr. B. Lemchen, Physician, Chicago State Hospital, Dunning, Ill.

With the advance of the medical science new means have been constantly added to insure a more nearly correct diagnosis which is the foundation of our medical art, as without a correct diagnosis we are unable to give a correct prognosis and the proper treatment. The value of laboratory examinations for the internist, of the excretions, secretions, exudates and transudates circulating media and parts removed from the body has been so clearly demonstrated that it is hardly necessary for me to consume your time to tell you about it. I might mention by way of illustration cases of two diseases that are very rare in the locality of the Chicago State Hospital as typhoid and malaria. In a few patients a correct diagnosis has been made by the examination of the blood and in two patients that have been in the institution for more than ten years the malaria organisms were demonstrated, although it was always believed that malaria seldom if ever originates in that locality. In one instance where a patient had been sent to the Chicago State Hospital with a diagnosis of involutional melancholia with a bad prognosis, after our examination we came to the concusion that her trouble might lie in the throat. We made cultures, found the Klebs Loeffler bacilli and gave her large doses of anti-toxin with the other treatments for diphtheria, thereby not only saving the woman's life but also restoring her mind after a few months' stay in this hospital.

But what interests us more in our branch as psychiatrists is the blood examination for Wassermann and the spinal fluid examination for syphilis of the nervous system. As Kraeplin states —if we could eliminate syphilis and alcoholism, we practically would eliminate the insanity problem. It is not only syphilis of the nervous system which is responsible for such an increase in our institutional population but syphilis in general. A good many of the so-called confusional insanities without known etiology, some of them even resembling dementia praecox, are more or less syphilitic in origin and the great number of positive Wassermann's we get in the so-called allied to the infectious exhaustion psychoses, also proves to be more or less syphilitic in origin. The examination of the spinal fluid is proving of so much importance in our diagnoses of cerebro-spinal syphilis, including general paresis and tabes that it is even more important than the original Wassermann on the blood and here I would like to give you some of our experiences at the Chicago State Hospital, in the examination of the cerebro-spinal fluid. The Wassermann on the cerebro-spinal fluid is done for us at the Psychopathic Institute at Kankakee. The other examinations we are doing in our own laboratory which consists first in cell counts, Noguchi and Ross Jones' test. Whenever I have a large cell count or globulin test, I always test chemically for blood. I use the benzidine test which is done by taking a little of the powder, dissolve it in a glacial acetic acid, then add an equal amount of hydrogen peroxide, then add the fluid and if blood is present it will turn blue. One of the newer tests on the cerebro-spinal fluid that they have been doing for some time is that described by Prof. Piero Boveri in the Muenchner Medicinische Wochenschrift on July 2nd, 1914, which consists in placing in a test tube 1 c. c. of spinal fluid, then on the top of the fluid adding an equal amount of .1 of 1 per cent of potassium permanganate and at the junction of the two fluids the permanganate changes from a rose to a yellowish color in from a few second to about five minutes, providing the fluid is not normal. In a normal fluid the color changes only after some time. Also by mixing the fluids together, the rose color of the permanganate changes to a yellowish or light color in from two to five minutes whenever the fluid is abnormal, while it takes quite a while for the color to change in a normal fluid.

Prof. Piero Boveri gives his experience in forty cases. He states that the reaction is a sure sign of a change in the spinal fluid from the normal, and it has the advantage as it is simpler and more specific than the previous tests. Whenever the albumens are increased in the cerebro-spinal fluid we get a positive reaction, but the potassium permanganate reaction does not always correspond with the other reactions because we do find some cerebro-spinal fluids that do not give the other tests but do give the potassium permanganate tests. We found the strongest reactions whenever there was an inflammation of the spinal cord.

The pathological changes in the fluids that are giving the test he does not know but thinks it is due to the pathological reactions of the cells and albumins of the cerebro-spinal axis due to the fact that we get the same reaction whenever we get the other reactions for the increase of albumins. Prof. Piero Boveri also thinks that it might be due to some of the pigments in the blood liberated by small hemorrhages in the spinal fluid. However, in my own tests several that gave the blood reaction did not give the potassium permanganate reaction.

In my own experience in 99 cases, I found that it runs close to a Noguchi butyric acid test. Whenever there is a positive Noguchi, there is a positive permanganate and if there is a negative Noguchi there is a negative except in 5 cases where I found a positive Noguchi with a negative potassium permanganate, but in testing the fluid chemically, I found that one of the same fluid contained blood and I personally believe from my own experience that this test will be a very valuable addition to our other tests.

I have here a table of 99 cases that I tested with this potassium permanganate and I can give the following results. Comparing potassium permanganate test with the Noguchi test, I found that there are five cases that gave the Noguchi test that did not give the potassium permanganate test. One of them contained blood. Out of the 99 cases we had 93 Wassermanns done of which four were anti-complementary which leaves a total of 89 cases. Of these 89 cases fifteen gave a negative Wassermann with a positive potassium permanganate. Comparing with the Ross Jones test, there are fifteen cases that gave a positive permanganate with a negative Ross Jones. Comparing the Ross Jones to the Wassermann reaction, we found that seven cases that gave a positive Wassermann gave a negative Ross Jones while eight cases that gave a negative Wassermann gave a positive Ross Jones. Considering all this table we found that even with the Wassermann the potassium permanganate runs as close as any of the previous tests, while it runs very close with the Noguchi butyric acid test.

In conclusion I might state that while it is hard yet to state of how much value the potassium permanganate is going to be in the future, so much can be said at the present. Owing to the simplicity of the test in its close relation to the Noguchi and to the Wassermann and Ross Jones, I believe that the potassium permanganate is going to prove a valuable addition to our previous tests.

Laboratory Tests.

Key to abbreviations:

C—Cells.
N—Noguchi.
R. J.—Ross Jones.
P. P.—Potassium Permanganate.
W.—Wassermann.
Ant.—Anticomplimentary.

In case any test has been left blank, test was not done.

W.	C.	N.	R. J.	P. P.
..	17	*	..	*
	49	**	*	*
****	110	***	**	*
..	5	..	..	..
..	13	*	..	*
****	66	***	***	*
**	10	**	..	*
***	24	**	*	*
***	12	***	*	*
*	13	*	..	*
**	14	*	..	*
****	12	*	..	*
****	90	**	*	*
****	12	***	***	*
****	23	***	***	*
****	8	***	***	*
	10	***	**	*
..	4	..	..	..
*	70	***	***	*
	70	***	**	*
****	20	***	*	*
****	22	***	***	*
..	48	*	*	..
***	10	***	***	*
..	3	..	..	..
****	250	***	***	*
..	5	*	..	*
..	7	*	..	*
..	1	..	..	..
Ant.	130	***	***	*
..	..	..	..	..
..	..	..	..	..
..	2	..	..	..
***	23	**	**	**
..	4	..	..	..
..	..	..	..	..
..	70	***	***	***
****	83	***	***	****
..	5	*	*	*
..	1	..	..	..
..	2	..	..	..
..	..	..	..	..
..	3	..	..	..
..	5	..	..	..
****	191	***	***	**
..	135	***	***	**
*	68	**	**	**
****	183	***	***	***

W.	C.	N.	R. J.	P. P.
..	20	**	..	*
..	38	***	**	**
..	13	*	*	*
	3	..	..	..
..	6	..	..	..
..	6	*	..	*
..	60	**	*	*
****	143	***	***	***
..	7	..	..	..
..	8	..	..	..
..	1	*	..	..
****	75	**	**	**
..	10	*	..	*
..	10	*	..	..
..	10	**	**	**
****	63	***	**	**
****	23	***	***	***
..	2	*	..	..
..	14	**	..	*
****	6	***	**	**
Ant.	18	**	**	**
Ant.	15	***	**	***
*	15	***	*	**
**	5	*	..	*
Ant.	15	*	..	..
**	18	**	*	*
	12	**	**	**
**	0	***	**	*
	1	***	**	*
..	1	..	..	..
..	6	..	..	..
	0	..	..	..
***	40	***	***	*
****	58	***	***	*
****	22	**	**	*
..	1	**	**	*
**	33	*	..	..
****	16	***	**	*
..	2	..	..	..
****	25	***	***	**
..	3	..	..	..
..	12	..	..	..
	4	**	..	..
	13	*	..	*
	56	***	***	**
	2	..	..	..
	3	..	..	..
	3	..	..	..
	7	..	..	..
	4	..	..	..
	100	..	..	..

Blood Trace

THE EARLY DIAGNOSIS OF PULMONAY TUBERCULOSIS.

By C. L. Sherman, Millwood, Ky.

When I was asked to write a paper for this meeting, I selected this subject not for the reason that I thought I had made a lot of new discoveries, or that I could add to what had already been written along this line for indeed it has been thoroughly thrashed out through the columns of our journals during the past few months or a year; too, we have had it at our other meetings, but some do not attend our meetings regularly while others do not read the journals as they should, and this subject is so very important that we should not allow a single meeting to go by without discussing it thoroughly. I am interested in this subject only for the cause of humanity and the relief of the suffering, for they are not pleasant cases to treat and for the general practitioner they are very hard to hold. However if we expect to do anything for them or have anything done, then we must diagnose them early. In no instance is an early diagnosis more important than in Pulmonary Tuberculosis. Just think of the startling mortality, nearly five thousand deaths in the state of Kentucky yearly from tuberculosis, twenty-four thousand four hundred during the past five years. If this terrible and much talked of war should go on that long I will venture to say that we will not loose as many lives, yet the war is upon every lip, and not a word said against this terrible evil that is continuing to grow every day. It has been truthfully said that the human being can be forced into anything, but you must go about it gradually, and so it is that this great monster Tuberculosis, has forced itsself upon the human race until not a hand is raised against it. When I say not a hand I speak in general terms for we have some men in the state that are doing an excellent work along this line but they need help and each and everyone of us ought to be willing to lend our assistance. Just look at the tremendous amount that is being expended preparing for the war, and then turn and compare the meager sum that is being donated for the prevention of tuberculosis. Almost daily I have mothers or wives come to my office wanting certificates to try to keep a son or husband from having to go to war, but on the other hand if one is suffering from tuberculosis the doctor is not usually called until some of the symptoms have become so well marked or so troublesome that they must have some relief. Although the truth is dawning upon them, they fear to know the truth and would rather live in doubt. So often have I had patients deny certain symptoms or lay much stress upon others, in order if possible to have me make some other diagnosis than Pulmonary Tuberculosis. You have all had this to

happen in your practice, and now why is it so? I will tell you why. It is for the reason that Pulmonary Tuberculosis is looked upon as certain death. No human being likes to hear a death sentence read out to him, and in our hands during the past the diagnosis of Pulmonary Tuberculosis has meant death to our patients, for the reason that we never make such a diagnosis unless we think our patient is going to die or that we are certainly positive that our diagnosis is true and when the absolute positive symptoms appear the case is usually too far gone for a recovery or even an arrest of the disease. I remember when I would not make a diagnosis unless I found T. B. in the sputum. I argued that it was too serious to think of making a mistake and serious it is if we wait for such late symptoms as hemoptesis, T. B. in the sputum, night sweats and the like. Time has worked a radical change in my conduct along these lines. It is cowardice, not to make an early diagnosis of tuberculosis. We are afraid of scaring our patients away, and quite often it is true they do leave us and go to some one else that will jolly them along and call it a bronchitis, phthisic, deep cold or something of the kind. But when we all begin to make the diagnosis early and will be frank with our patients and tell them their condition, and that they don't have to die because they have tuberculosis. Some men claim as high as eighty and others ninety per cent. of cures if diagnosed in its incipiency, and when people begin to realize this and we all begin to tell them so it will take on a different aspect, and it will not scare our patients to death if we tell them they have "consumption." I would rather make ninety-nine mistakes and save one life out of a hundred by calling it tuberculosis than to make a perfect diagnosis in all and lose all of my cases as the most of us have been doing in the past.

Out of a hundred autopsies made by the Massachusetts General Hospital when death occurred from some other disease than tuberculosis and when tuberculosis was not suspected, 21 per cent. was found to have or have had some form of tuberculosis, 10 per cent. in glands alone, 7 per cent. lungs alone, and 1 per cent. plira, 3 per cent. both glands and lungs. In other words 10 per cent. showed old lung lesions that had healed. These cases were taken at random and were not picked cases at all and therefore ought to be something near an average, and coming from such authority as Richard C. Cabbott and Hugh Cabbott, it ought to be sufficient to make us give it a thought. Just think 10 per cent. of our people have had Pulmonary Tuberculosis and got well without it ever having been diagnosed or treated. Possibly in many instances the treatment they did get not being guided by a proper diagnosis, was a hindrance to the disease, and nature cured it in spite of all that; then what could she do if we would but lend her a little assistance before it is too late. I believe we ought to have a sanitarium in every county and each of those sanitariums ought to be full of patients all the time, for we have the material to fill them with if we would only search them out. And now we will discuss the way to get about it. First I will give a list of early symptoms and then we will try to pick out the most important ones, then we will cull out and get the easy ones and see if we can't make it so easy that anyone can with all ease make a diagnosis, convince people that a thing is easy if you want them to take hold. Here is the list.

Loss of appetite, loss of strength, easy to fatigue, loss of weight, cough, fever, night sweats, chills, hoarseness, rapid pulse, hemoptysis, shortness of breath, pain in chese, pluracy, gastric symptoms, low blood pressure, dilated pupils, sweating under the arms, easy to take cold, slow to convalesce from any of the acute diseases. This latter if not accounted for should always be looked upon with suspicion; persistent localized rahls. Any one of these symptoms may be the first to present itself while the following should always cause us to make a careful examination of the chest.

1st. A history of malaise, languor, apathy, or what the laity usually call being run down, then on top of that a history of recent exposure.

2nd. Continued general weakness following child birth, without a history of puerperal infection.

3rd. A recent acute illness with a slow convalescence.

4th. Dyspeptic symptoms in a young adult accompanied by anemia.

5th. Persistent fever afternoon above 99.4 accompanied by rapid pulse and loss of appetite.

6th. Loss of flesh or strength without obvious cause.

7th. Eeasy to fatigue.

8th. Hoarseness or loss of voice.

9th. Cough.

10th. A history of pluracy.

11th. A history of hemoptysis.

12th. Any one complaining of ill

health and giving a family history of tuberculosis.

Keep these in mind and by so doing know when to suspect it and the diagnosis is half made.

Now I promised to point out the early easy symptoms that are most to be relied upon. On questioning a number of men who are engaged in tubercular work alone, as to what they relied upon most in an early diagnosis, the answer was I think without an exception, history.

Any man can take the history of a case but it is not every man that can interpret it. We should commence as far back as the grandparents then take in all of the aunts and uncles, then the father, mother, brothers, sisters and also their near associates. It has often been traced to a chum, desk mate, or a partner in business. And it is not enough to know of what a certain one died but we should inquire, How long were they sick? Did they have a chronic cough? or did they ever spit blood? Then when we get down to the patient himself find out all the diseases they have had, their duration and severity, whether a speedy or slow recovery.

Just here I might mention a case that will illustrate: A girl twelve years old. Nothing important about the history untill we get to the birth of the child, mother had a slow convalescence; had a cough for more than a year, then was in bad health up until two years ago; was treated for malaria at frequent intervals during that time. Personal history, child had a cough, so much so that other children were afraid of her for fear she had whooping cough; quite often would have attacks of fever and would be laid up for a few days, then out again, so much so that the mother had quit paying much attention to it; has not coughed much for a few years; health better but still has "puny spells" as the mother calls them; appetite poor. Personal examination shows the child slightly under size, otherwise apparently normal, possibly slight evidence of old lesions in the apex of both lungs. I did not get to follow this case or go through it as I would like to have done, the mother called me in she said because there was so much typhoid in the neighborhood, that she thought possibly the child was taking typhoid, but if it was only one of her old "puny" spells that was just her stomach and she would soon be all right. Now such cases as this ought to be watched. We can at least teach them how to take care of themselves and possibly prevent them from spreading the disease, however when these things are taught in our schools and we bring other children up to fear them, it will be a more effective way than trying to control the child that has the disease, until we get laws that will control them by force. Now back to the subject.

Persistent rahls is a symptom that any one can elicit and is almost a pathognamonic sign. For instance a patient comes to us for examination, and we find rahls in left subclavian region, and no where else he returns in a few days and they are still there, add to this an afternoon rise of temperature, fast pulse and loss of weight and you have enough for a diagnosis.

Fever after exertion if it lasts more than a half hour, is very suspicious. Dr. Roberts of Wataga, Tenn., says he would rather depend on this than a dose of tubercular serum.

Now to recapitulate: History of tuberculosis in the family of associates; loss of appetite; loss of weight; persistent rahsl; elevation of temperature at some time during the twenty-four hours; slight cough. These are sufficient to my mind to justify us in making a diagnosis, however there are other symptoms, many of them that would make us more positive, such as hemoptesis, chills, night sweats, T. B. in the sputum, continuous fever, severe cough and such like that I did not make mention of, for they are later symptoms and should not be waited for. However if we have sputum we should make repeated examinations for T. B. It is negligent not to do so. The physical signs I have left out for the reason that they are more difficult, percussion especially is not to be depended upon above the symptoms that we have mentioned, unless by the very experience, but when percussion brings out signs in connection with what I have mentioned then they are to be relied upon and I do not wish to discourage any one in making a thorough physical examination in every case, for we certainly do need training along that line. But I would like to discourage the practice of making such examinations through the clothing for such findings are not reliable unless the case is advanced.

Symptoms without physical signs need treatment. Physical signs without symptoms need watching.

A BARN SHED COURSE IN SURGERY.

By A. B. Grubb, Cripple Creek, Va.

Every doctor who is the least remote to a hospital or a skilled surgeon is going

to be confronted with a case where nothing but a hasty operation will save his patient's life. If he waits until the next train, or what is worse if he bumps his patient over a rough road for several miles to catch a train, then reaches a surgeon (who opens abdomens by the hundreds), and then brings his patient home in a coffin, he has not done his duty. The family physician who shifted the responsibility off on to more trained hands, who weeps with the sorrowing family, who is even loved more than ever, has plenty of defenders of his act of omission. First among his defenders may be the surgeon, who explains to the family that surgery should not be attempted except by a hospital staff with years of training, then the neighborhood palliates the omission thusly: "Dr. got him to the hospital just as quickly as he could, but the main fault was they should have sent for the doctor earlier," and the kind minister commits him to the ground with the grateful words, "we have done all that loving hands can do." Yet the patient, gentle reader, can not return to hear the words of comfort. Those who leaned upon him for their support and comfort, must bear their burdens alone.

The family physician may be a man of extreme sympathy, and the very fact of his ultra-sympathy makes him very timid. He feels that he just can't do surgery. That an artery might bleed his patient to death, that the anaesthetic might kill him on the table, or that, who knows, his knife might simply drop out of his own hand, and that his quivering hand might not place the stitches where they should go. He perhaps has seen the best surgeons of the world operate, but their dexterity over-awe and accentuate his timidity, and a text-book description of an operation makes it more hazy than ever.

His ideas are partly correct. One might read surgery and watch surgery for a score of years and then be positively unfit to do anything.

So the course to which I commend to every one is to go out to the barn shed anaesthetize one of the cur dogs of the community and never stop until you have done eight to ten major operations on him. The dog will still be alive and perhaps his heart will be just as good as when you began, but in order to save him post-operative pain, he should be chloroformed until he is dead after you are through operating. More than once I have seen a dog survive an enucleation (of eye), resection of one or two ribs, kidney excised or removed, gall bladder drained, gastro-enterostomy, resection of 12 inches of bowel, the bladder opened and explored, and a tracheotomy done and the dog still able to stand more, as there would be practically no shock.

The proper way to anesthetize him is to give him sixteen quarter grains of morphine with your hypodermic. Four grains of morphine seems like an unusual dose, but it takes that much to get results in a dog.

Then during the operation he should be given a few whiffs of ether or chloroform. By this method the operation can be done void of pain. When you want to kill him after completing your work have an inhaler that allows no air and saturate it with chloroform, and you will be surprised in most instances how hard it is to make him die.

The larger the dog the more satisfactory your work as his viscera are more similar to man's. The ribs can be resected with a Gigli saw and an eneurysm needle to carry the saw under the rib; as his pleura lies flat against the rib care should be taken to prevent a puncture of the pleura or lung. This of course would not happen if the patient had a marked empyema. So far I have not noticed an appendix in the dog, but if you have a large dog some good experience can be gotten by resection and anastomosis of the bowel. If the dog is small his bowel is so small that an end to end anostomosis is tedious.

After becoming acquainted thoroughly with dog surgery, the human being can be opened with confidence akin to that of the surgeon of years of experience.

Cases of a ruptured appendix, or gall bladder, or pyloric ulcer, or tubal pregnancy, typhoid perforation, septic peritonitis, etc., require an operation at once. If the patient is seen at midnight for the first time, daylight must not, by any means, be waited for, but any old smoky lamp will give plenty of light.

If the patient is in a cabin and the walls are covered with cob webs and the furniture is dusty don't let the germ theory be a bugaboo, with an ordinary antiseptic to the surgeon's hands and the patient's skin cleaned thoroughly, and there is not hardly the slightest danger but what you will get a clean operating wound and union by first intention.

Of course you should have your nearest medical neighbor as your assistant, and preferably should have two, but in case you have only one, a layman can be shown how to give your ether or chloroform.

It is a painful fact that people are dying daily from lack of an early operation. Your author knows of quite a few instances and perhaps our readers can report still more, so if this article stimulates the saving of even one man's life then it will not have been written in vain.

FOREIGN BODY (MERCURY TUBE OF THERMOMETER) IN BLADDER.

By Albert D. Parrott, Kinston, N. C.

The following case seems of sufficient interest to report:

Mr. C. H. P., age 54, was referred to us by Dr. C. W. Sutton of Richlands, N. C., for diagnosis and treatment. He came to us with the following history.

Two weeks ago one night while firing the furnace of his tobacco barn he noticed a glittering object lying on the ground, picked it up and found it was about 5 and 3-4 inches of glass mercury tube taken from a thermometer, the type used by farmers for keeping "tab" on the temperature in their tobacco barns, while curing tobacco. He put it in his mouth, and noticed that something was needed regarding the regulation of his fire, and poked a long pole up the furnace, and on raising up accidentally bumped his head against one of the sloping rafters of the barn-shlter. This caused him in some way to swallow this piece of mercury column. He said this caused him great pain in his epigastric region, and quite a good deal of fright. He did not then send for a physician, hoping he might pass the object. His pains which were general, abdominal continued to grow worse, and finally he developed a very pronounced hematuria, accompanied with great pain and urgency. He also said that several times he passed bloody stools accompanied with marked tenesmus. I disbelieved the above story from the first. A Tuttle Sigmoido scope was passed, and his Sigmoid, and ano-rectal region inspected with negative results. I then had a Radiograph made of the lower abdomen and pelvic region, which showed the object very distinctly, lying transversely in the lower pelvis, in what I thought was the bladder. I then introduced an Otis-Brown examining Cystoscope into his bladder locating it distinctly and accurately. Of course there was nothing to do but suprapubic cystotomy which I promptly did, removing the glass tube with tolerable ease. The tube was so long that the bladder walls at each end of the tube was pushed out, or sacculated. The glass tube was rounded, and smooth at one end, rough, jagged, and cutting at the other and encrusted with urinary salts in spots. This patient made an uneventful recovery leaving the hospital in eighteen days. Of course he did not swallow this object, but in all probability is a sexual pervert, and pushed it up his urethra, and accidently got it too far, and it slipped into his bladder. He frequently told me his "swallow" hurt him, and tried to impress upon me the fact that this pain was due to onward passage of thermometer stem. I never tried to get a confession from him. He was of a neurotic type. One brother is a sanctified preacher, another castrated himself when his wife accused him of infidelity. He did this he said to prove his innocence.

Gangrene of the Leg Following Diphtheria.—Gunson, in The British Medical Journal, reports the case of a boy six years old, with a severe faucial diphtheria of four day's duration, was given 20,000 units of antitoxin and repeated on the fifth day. On the eleventh day the pulse became weak, and on the thirteenth day the cardiac dullness was increased. On the seventeenth day the pulse became markedly irregular, with paroxysms of tachycardia and the liver dullness extended to three inches below costal margin. On the eighteenth day he complained of pain in the right popliteal space, with some cyanosis of the skin below the knee. Gangrene first appeared on the twenty-second day on the right small toe. The heart condition was now much improved. The gangrene continued until the thirtieth day, involving the whole right leg below the knee. Pharyngeal paralysis developed on the thirty-fourth day. Improvement in the general condition was gradual, until the seventy-first day, when the right leg was amputated in the middle of the thigh. The popliteal artery was found completely occluded by a thrombus extending two inches above the bifurcation of the artery. The author states that Rolleston, reporting a similar case in 1910, was able to find but 10 cases in the literature.

I have personally derived great benefit from Tongaline for "colds," taking it on the first appearance of any of the symptoms, and in nearly every instance abort the disease, and I use several bottles of Tongaline myself during the winter months in that way."

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

WHISKERS.

A hirsute was, and is inveighed against on the hypothesis that whiskers are the habitat of death-dealing germs. It is possible that if be-whiskered doctors would go into seclusion for a time, and study Nature's laws more, and aestheticism less, it might be a disadvantage to them, and a decided advantage to the people! It need not be concluded, however, that hair is any evidence of brains!

About whiskers, there is one compensation, and germ-proof fact, and that is, "the wind blows through his whiskers." Bilroth sports a glorious hirsuite adornment. In fact, whiskers are a characteristic of Germans; and yet they are mortally afraid of germs. As a rule, surgeons wear no beard; but some do.

Why shouldn't a man keep his beard as clean as the hair of his head? Maybe surgeons with bald heads are the best! Short whiskers are safer than long, flowing ones. Ablution and disinfection would be easier. A mustache is filthier than a beard, because it may be a purveyor of onions, garlic, and cabbage, as well as beer! The fewest number cleanse the mustache. A mouth-covering "mustachios" is an abomination; but the fuzzie mustache of the dude, is just lovely. The good old Scotch physicians and divines wear side-whiskers. They are peculiarly distinctive. However, like many other useless things, whiskers have gone out of fashion. There was a time when everybody, who could coax a crop, wore whiskers. Now, the tonsor keeps down the growth.

AUTOCRACY.

A great change will eventually be brought about all over foreign countries, in relation to the governed, by the governments. It is now, that governments are based on personal authority, and are maintained by personal prowess. The autocratic governments are ruled over by those who claim transmitted absolute authority. Gradually, the doctrine of limited authority will be recognized, to be succeeded, in time, by a democracy. Such transition is not to be accomplished overnight, but will come as civilization advances and one man rule is abolished. As the world will gradually progress, ignorance, blind submission and superstition, will give place to general intelligence. Then will the people rule. The doctrine of the greatest good to the greatest number will surely come out of this world conflict. If it doesn't, all the enormous treasure, and rivers of blood, will have been in vain. The submission, even forced, must be changed, and the down-trodden, cruelly oppressed people, will come out victorious over the cruelties of autocracy. God will bring good out of this dreadful sacrifice of life. There can be no doubt of it. The Civil War struck the shackles off millions of human beings, and the nation, North and South, took on new life, and it has been of untold blessing to the former slave states. Wealth, advancement and prosperity, have blessed the South. The dark blight of slavery has given place to the sunshine of prosperity and contentment.

TRICKS OF THE TRADE.

Many physicians totally disregarded the ethics of the profession, and are patient grabbers. They will belong to medical societies, and subscribe to the ethics of the profession, but they ignore the ethics in practice. It used to be, among the practitioners of years ago, and is yet among the honorable and high-minded; but the rule among the later physicians is to resort to anything to get the almighty dollar. They will resort to all kinds of tricks to add patients and lucre to their bank account. I heard a physician say he was going to do everything to get the dollar. He had no conception of the philanthropic feature of medical practice. He would turn a deaf ear to the appeals of moneyless and innocent sufferers. Would a physician be so heartless as to let innocent wives and children suffer because a worthless husband and father wouldn't pay? If a man doesn't get his pay from such people, the fact that he is charitable and benevolent will commend him to those who will pay. And furthermore, he will be blessed, not only here, but will lay up treasures elsewhere; treasures not measured by dollars and cents. "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me!"

ETIQUETTE.

Nothing commends a person more than politeness and regard for the feelings and

sensibilities of others. Rudeness and harshness are offensive to anyone. It is a lovable trait to be mild-mannered, patient, and of a quiet demeanor. It is one among the most disagreeable habits some persons have, of speaking disparagingly of others, when there is no cause for it. Some refer to the shortcomings of others and never refer to good qualities which more than balance the criticism. It is very unjust to form an opinion of others when one doesn't personally know them; and it is especially mean to express an adverse opinion. The habit of criticising persons for some acts, when you know not the motives that actuate them, is a cruelty. Practice charity in estimating one's weakness or frailties; and above all things, if you can't speak well of another, keep silent. There are persons who have the abominable habit of speaking ill of everybody. Another habit the rising generation have, and that is a lack of respect and veneration for old age. A hoary head is a crown of glory.

Due consideration and deliberation is wise. Think before you speak. Solomon says: "Seest thou a man hasty in his words; there is more hope for a fool than for him." "A wholesome tongue is a tree of life, but perverseness therein is a breach in the spirit." "A man hath joy by the answer of his mouth, and a word spoken in due season, how good it is!"

NECESSARY.

It is necessary for a physician to possess tact! Tact does the right thing in the right way. Say things with care, and be discreet! Talk enough, but avoid effusiveness! There are doctors who talk themselves out of business. Be kindly, attentive, but don't stay so long in the sick chamber that it will be a relief when you depart!

Be quiet; but attend to business, and go out! Don't impose on the sick by making unnecessary calls. Let them understand that you will not neglect them, but that you will return when needed, and as long as needed, but no longer. Don't be as slow as a dumb watch; but be alert and not careless and hasty. Everything depends upon tact, and good judgment.

TRAVESTY.

It is a travesty upon "Registration" and license that an ignoramus can get by, who speaks of neuralgia as "neualigy," rheumatism, "rheumatiz; diarrhea, as "diarhee;" pneumonia, "numony;" tubucklosis;" symptoms, "sintims;" intestines, "indestines;" expectorating, as "spitting up;" Bright's disease, as "Bright's disease of the kidneys." Boils were "biles," and bile was "boil;" stomach was "stummick." He thought scarlatina meant mild scarlet fever. He spoke of "midwifery," and no end of mispronunciation. He was not intelligent enough to practice medicine. As a matter of fact, the "woods is full" of ignorant practitioners, if they can be called such. The need today is studious doctors—not idlers and drug store loafers. It seems to be a favorite resort for a class of doctors who blow to the laity about a practice and about cures they never made? They may make an impression upon the ignorant and gullible; but they are sure to disgust the intelligent.

EDITORIAL NEWS ITEMS

Dr. George Winston Taylor and Miss Carey Wilson were married at Mooresville, N. C., November 7th.

Dr. George Costner of Lincolnton, N. C., and Mrs. Radiant Frances Sistare, were married on November 8th. Dr. Costner is a well known physician of Lincolnton, N. C.

Dr. L. C. Floyd and Miss Elenor Rush were married at Orlanta, S. C., on November 4th. Dr. Floyd is a popular physician and Mrs. Floyd is a very popular and handsome woman.

The Norfolk Medical Association, of Norfolk, Va., has decided to meet every second Tuesday at 4 o'clock in the afternoon instead of every three months, as has been the custom for several years.

James B. Chambers, the founder and for more than thirty-five years the president of the Dios Chemical Company, died November 6th. In the death of Mr. Chambers the pharmaceutical world has lost one of its best and most useful members.

Dr. Raymond Pollock, of New Bern, N. C., is in the Medical Corps in the U. S. Army, at Camp Sevier, Greenville, S. C. He left his home in New Bern, October 30th and assumed the duties pertaining to this rank.

Georgia State Board of Medical Examiners.—Dr. J. W. Palmer, of Alley, was elected president of the board, at the annual meeting held recently in Atlanta. Dr. A. F. White, of Atlanta, was elected first vice-president, and Dr. C. T. Nolan, of Atlanta, secretary.

Dr. T. R. Teague, of Greenville, S. C., died November 3rd. During the many years he practiced medicine, he was very prominent and very successful.

Dr. Teague was at one time a member of the House of Representatives and he served all constituents with credit.

Dr. Thomas A. Williams, of Middletown, Va., married Miss Ethel Ambrose, of Clary, Shenandoah county, November 7th. Dr. Williams has been a prominent practicing physician at Middletown for several years. He recently offered his services to the government and has been appointed as first lieutenant in the medical reserve corps.

The Wilson County Medical Society of North Carolina, held its regular monthly meeting November 8th. Several papers were presented and were freely discussed by Drs. W. S. Anderson, W. H. Anderson, H. H. Best, K. C. Moore, E. L. Strickland, A. F. Williams, T. H. Wilson and E. T. Dickinson. The meeting was interesting and a very valuable one.

Dr. T. R. League, of Greenville, N. C., died November 1st. He has been in ill health for the last few years. He practiced medicine for many years at Greer, N. C. He was a popular and useful physician. Dr. League at one time was an honored member of the House of Representatives from his county. He graduated from the Medical College of Georgia, many years ago.

Dr. Ward B. McCaffrey died in Philadelphia on November 4th. The doctor has been located at Cape Charles Quarantine Station at Old Point, for many years. Dr. McCaffrey graduated in medicine from the Jefferson Medical College in Philadelphia. He was born in West Virginia. Dr. McCaffrey was 42 years old. He always filled his professional engagements intelligently and promptly.

Dr. J. T. Hughes, of Russiaville, Ala., was killed on November 5th by Rev. J. R. Terry, a Methodist minister of that place. Dr. Hughes was graduated at the Chattanooga Medical College, Medical Department of the University of Chattanooga (now extinct). Dr. Hughes was examining physician for the Franklin county exemption board. The cause of the shooting is not at this time known.

The Kentucky State Medical Association, at its annual meeting, held in Louisville, on November 8 and 9, elected the following officers: President, Dr. J. S. Lock of Barbourville; First Vice-President, Dr. J. L. Barker of Pembroke; Second Vice-President, Dr. H. H. Stallard of Pikeville; Third Vice-rPesident, Dr. J. C. Douglas of Franklin; Delegates to the American Medical Association, Dr. W. W. Richmond of Clinton and Dr. C. L. Wheeler of Lexington.

Dr. F. M. Winchester, of Charlotte, N. C., died November 13th. Dr. Winchester was a prominent practitioner of medicine in Charlotte for over twenty years. He was a prominent Mason. He had filled every position of honor that the different Masonic orders of the State could give him. He was at one time master of the Grand Lodge of North Carolina. He was an active member of the Scottish Rite and was a popular Shriner.

Dr. Winchester graduated from the Jefferson Medical College, Philadelphia, 1883. He was licensed to practice medicine in this state in 1887 and joined the State Medical Society in 1904. He was a faithful, efficient physician and enjoyed the confidence of a large patronage and had a large circle of friends.

Dr. James Madison Covington, of Wadesboro, N. C., died November 6th. Dr. Covington was a native of Rockingham, N. C. He moved to Wadesboro about 15 years ago. He was 77 years of age. He is the father of Dr. J. M. Covington, Jr., now of the United States Army stationed at Richmond, Va., and Platt Walker Covington, M. D., of Austin, Texas. Dr. Covington, practiced in Wadesboro and Rockingham for over forty years and possibly was one of the most prominent physicians of that entire section of the state. Dr. Covington graduated in medicine from the Medical College of South Carolina, in 1874. He was licensed by the State Examining Board in 1879, and joined the State Medical Society the same year.

Dr. Covington was one of the most cultured and refined and attractive professional gentleman that the writer has ever known. He was truly a gentleman of the old school.

Doctor Baruch Honored by the City.—On Monday, October 29th, Rivington Street Baths were renamed the Dr. Simon Baruch Baths and a bronze tablet was unveiled there commemorating Doctor Baruch's work in publis sanitation. Twenty-eight years ago he began his fight to have the public baths and swimming pools made available for the poor of the city, and twelve years later the first public bath was built. This bath proved to be such an important factor in diseases prevention that since then twelve additional baths have been built and six floating baths. The city statistics show that in 1916 these public baths were used by 9,227,375 bathers. In August of this year at the Rivington Street Baths, now the Dr. Simon Baruch Baths, 136,096 bathers used the baths, an average of 4,390 a day.

Dr. Baruch in his young professional life practiced medicine in Chester, S. C.

America May Use German Patents.—The Federal Trade Commission has issued regulations under which German-owned patents and copyrights will be licensed for manufacture by citizens of the United States. After the regulations were made public the commission conferred with a group of medical men to consider the licensing of certain drugs and non-toxic substitutes for local anesthetics of which the supply in this country has run dangerously low. Approximately 20,000 patented and copyrighted articles are said to be affected by the commission's orders. It is said to be likely that any licenses issued for the manufacture of drugs will carry a provision that a certain percentage of the output be turned over to the Public Health Service. The regulations follow the law closely in safeguarding the interests of patent owners, who must be reimbursed for the use of their inventions, and licenses will be issued only where the interest of the public demands it.

Personnel of American Medical Units Attached to British and French Forces.—There are 3,180 medical officers, nurses, and members of ambulance sections of the United States army now attached to the British and French forces. This total is made up of 870 medical officers and 470 nurses with the British forces and forty ambulance sections ,each of 46 officers and men (a total of 1,840), with the French army. All of this American personnel is loaned to the British and French forces. It is subject to recall, and can, if the War Department so decides, be assigned to duty with the American forces. All wear the uniforms of the United States army. The plans contemplate the replacement of some of these officers and ambulance sections from time to time by fresh units from the United States and the assignment of the experienced units to the American expeditionary forces. Considerable additions to the number of American ambulance sections attached to the French army are in prospect. Provision has been made for the formation and training of 120 more sections at Allentown, Pa., all for eventual service with the French army.

Medical Women in France.—It has been reported that the American Women's Hospitals have sent a unit of women physicians to France is incorrect. Several hospitals have sent through the Red Cross some twelve practitioners to France, who will work independently in various localities, but not as a unit. The organization of the American Women's Hospitals was inspired by the fact that the war service of the women of Great Britain is being made known to the world under the name of the "Scottish Women's Hospitals," and was established after consultation with the authorities in Washington. The work to be done by this organization differs somewhat from that of the Scottish Women's Hospitals in that the American women physicians will give civilian as well as military relief both in this country and abroad. The hope is that the American Women's Hospitals will be able to establish in the devastated portions of the Allies' countries a series of dispensaries to be tributary to central general hospitals. Those not needing hospital care may thus be looked after in the dispensaries, while the serious cases will be taken by ambulance to the nearest general hospital for treatment. The American Fund for French Wounded has officially suggested co-operation with the American Women's Hospitals, the latter to look after the diet and other factors relating to the rebuilding of health, and there are plans for co-operation with other relief organizations in other countries.

The Medical Society of Virginia held its forty-eighth annual meeting at Hotel Roanoke, Roanoke, Va., October 30-November 2, 1917, with a large attendance. The opening session of the Society, on Tuesday night, was presided over by Dr. Geo. A. Stover, who delivered his Presi-

dential address after invocation by Rev. W. C. Campbell.

After the address by Dr. Freeman, two scientific papers were presented, one on Cancer of the Breast, by Dr. J. Shelton Horsley, Richmond, and the other on Osteitis Deformans, by Dr. E. T. Brady, Roanoke, both of which were illustrated by lantern slides. Reports of officers and various committees were presented at the Wednesday morning session.

The subject for general discussion—Diseases of the Bladder—was presented by only two of the four appointed leaders, Drs. E. H. Miller, Danville, and John Staige Davis, University. The other two leaders, Drs. T. V. Williamson, Norfolk, and A. L. Herring, Richmond, were unable to be present, owing to the fact that they are now on active duty in the medical service of the government.

The Symposium on Medical Military Preparedness, which was presented at a local theatre, Wednesday evening, attracted considerable attention and was probably the feature of the meeting. The speakers were Major Stuart McGuire, Major J. Garnett Nelson, State Health Commissioner E. G. Williams, Surgeon L. L. Lumsden, U. S. P. H. Service; Col. E. L. Munson, Medical Corps, U. S. A., and Major Henry Jump, attached to the office of the Surgeon General of the Army, Washington.

The following officers for the coming year were nominated and duly elected: President, Dr. Ennion G. Williams, Richmond; vice-presidents, Drs. S. W. Dickinson, Marion; Harry T. Marshall, University, and C. D. Barksdale, Sutherlin; secretary-treasurer; Dr. P. A. Irving, Farmville; delegates to the American Medical Association, Drs. W. E. Anderson, Farmville, and Southgate Leigh, Norfolk, were elected to succeed themselves, their alternates being respectively, Drs. E. T. Brady, of Roanoke, and G. A. Stover, of South Boston.

The newly elected councilors are: State at large, Drs. W. R. Cushing, Dublin, and Beverly R. Tucker, Richmond; First District, Dr. Clarence Porter Jones, Newport News; Third District, Dr. A. G. Brown, Richmond; Tenth District, Dr. Charles H. Davidson, Lexington. Officers of the new Council are Dr. A. L. Gray, chairman, and Dr. A. G. Brown, Jr., clerk, both of Richmond.

The following standing committees were elected: Membership Committee, Dr. W. D. Turner, chairman, and Drs. George J. Williams, J. E. Knight, W. F. Driver and Frank H. Smith; Legislative Committee, Dr. H. U. Stephenson, chairman, and Drs. J. Bolling Jones, C. H. Rolston and T. S. Hening; Necrological Committee, Dr. Charles M. Edwards, chairman; Judiciary Committee, Dr. Charles M. Edwards, Chairman; Judiciary Committee, Dr. Charles R. Grandy, chairman, and old committee.

Members of the Medical Examining Board of Virginia nominated to the Governor for appointment are as follows: First District, Dr. J. H. Ayres, Accomac; Second District, Dr. P. St. L. Moncure, Norfolk; Third District, Dr. J. E. Warinner, Richmond; Fourth District, Dr. J. Bolling Jones, Petersburg; Fifth District, Dr. R. S. Martin, Stuart; Sixth District, Dr. J. W. Preston, Roanoke; Seventh District, Dr. P. W. Boyd, Winchester; Eighth District, Dr. S. W. Maphis, Warrenton; Ninth District, Dr. W. W. Shaffin, Pulaski; Tenth District, Dr. Robert Glasgow, Lexington.

The next place of meeting will be Richmond, during the month of October, 1918.

BOOK NOTICES

Diseases of Women, by Harry Sturgeon Crossen, M. D., F. A. C. S., Associate in Gynecology, Washington University Medical School, and Associate Gynecologist to the Barnes Hospital; Gynecologist to St. Luke's Hospital, Missouri Baptist Sanitarium and St. Louis Mullanphy Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists. Fourth Edition, Revised and Enlarged, with Eight Hundred Engravings, St. Louis. C. V. Mosby Company, 1917. Price, $7.50.

The two principal additions in this revision are, first, numerous drawings and photomicrographs illustrating gynecologic pathology; and, second, a chapter on the ductless glands in their relation to gynecology. The drawings and photomicrographs were made from material in the Gynecologic Laboratory of the Washington University Medical School, and in their preparation invaluable assistance was rendered by Dr. Otto Schwarz, in charge of the laboratory. The helpful chapter on the ductless gland system was written at my request by Dr. Hugo Ehrenfest, to whom I am indebted also for his great kindness in seeing the book through the press, my doing so being prevented by an early call to war duty.

The drawings are by Mr. Ivan F. Summers, and present his usual satisfying excellence.

The method of presentation of the various subjects, and the different editions have proven so satisfactory that no change has been made in this fourth edition. The treatment of inoperable cases of severe uterine prolapse and systocele, has been given special attention and a number of new drawings have been made to elucidate the action of the most effective methods. Dr. Crossen, when he had the revision of this work in hand, was called to active war duty, consequently, most of the work of revision was turned over to Dr. Hugo Ehrenfest, professor of obstetrics in St. Louis University. He has done his work well and Dr. Crossen is to be congratulated in having associated with him in the revision of this wonderful book, a man like Hugo Ehrenfest. The book has given the latest advances in the science and practice of gynecology, each subject has received proper consideration.

In a special chapter an interesting problem of the relation of the endocrin gland system to gynecology is discussed by him more comprehensively and systematically than ever before attempted in any text-book on gynecology. The illustrations, 800 in number justify the reviewer in making the statement that no better work on gynecology has ever been illustrated than this one. The illustrations are accurate and certainly sufficient to properly explain the text. The volume is one of the handsomest that we have received for review in a long time. It contains 1,160 pages. While the price of the book is apparently large, it is comparatively low considering the value of the book. The price is $7.50.

The History of Medicine, With Medical Chronology, Suggestions for Study and Bibliographic Data, by Fielding H. Garrison, A. B., M. D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., Second Edition, Revised and Enlarged. Philadelphia and London, W. B. Saunders Co., 1917.

The first edition of this book was indeed well received by the entire medical profession. The present edition which has been revised and greatly enlarged has been prepared in compliance with the demand for such a publication. The fact that the writer had the endorsement and to some extent, the co-operation of such men as Sir William Osler, the late Dr. S. Weir Mitchell, Dr. A. Jaconi, the late Dr. James G. Mumford, Dr. Harvey Cushing, and many other friends, is a sufficient endorsement of the book. The author makes it easy for a reviewer to recommend the book. There is one thing about the work that should especially appeal to all readers of medicine and it will appeal to the higher type of medical men. The reviewer has in mind the impartiality exhibited throughout the work. The author recognizes that it is difficult to affirm that the pages contain anything unfair to German medicine or to the modern German organization. The author certainly has been fair and I think, accurate, and has endeavored to be a formal, impersonal historian.

As stated in the preface of the first edition, the author had in mind a definite literary intention, that of stimulating the student and physician to do his own thinking and research by interesting him in the subject at the start. He wants his book to be considered a guide book to a territory of vast dimensions; he has made no extravagant claims except the book is a product of his own pen. He claims that his book is accurate so far as it is possible for a book of this character to be. We participate in this belief. In the preparation of a book of this kind, the material and field is so great, no one volume could be constructed in a way, without many important and interesting things being left out, consequently this kind of medical literature, even if several books are published, touching upon valuable historic things in medicine, we would not have an excess of this particular kind of literature.

Impotence and Sterility, with Aberrations of the Sexual Function and Sex-Gland Implantation, by G. Frank Lydston, M. D., D. C. L., Formerly Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Medical Department of the State University of Illinois, Member of the American Urological Association, Fellow of the American Medical Association, Member of the Society of Authors, London, England, Etc., The Riverton Press, Chicago, 1917. Price $4.00 Net.

The author is of the opinion, and I think he is correct, that there is room for still another monograph, certainly one like this is, on the diseases and aberrations of the sex function. The author thinks that it is advisable to present in a prominent form his theory of aberrations

of sex development and function and to give an account of his own researches and observations in the field of sex-gland implantation, and he thinks further, that it will be sufficiently obvious to those laborers in the field of science who have learned to their cost that the medical press alone cannot be relied upon to perpetuate, protect and give lasting credit for original work. The author hopes that the legal profession may find in the chapters on Sterility, Sex Aberrations and Sterilization, material of forensic value.

It is very likely, and I believe generally admitted that Dr. Lydston has given this subject more thought and study and more research work than any other man. Whether or not all of his experiments and claims will bear the test of time is unknown. He deals with a subject that is interesting to all men and all women, because all of us want to live always. Dr. Lydston, as is generally known, is one of the best writers that we have in this country. He is always scientific and logical when dealing with any subject that he writes about. We do not wish to convey the idea that the book is entirely theoretical or that there is no debate about the findings set forth in this volume. It is full of well known truths, compiled and edited in an attractive and useful way.

The Growth of Medicine From the Earliest Times to About 1800, by Albert H. Buck, B. A., M. D., Formerly Clinical Professor of Diseases of the War, Columbia University, New York; Consulting Aural Surgeon, New York Eye and Ear Infirmary, Etc. New Haven: Yale University Press. London: Humphrey Milford Oxford University Press MDCCCCXVII. Price $5.00.

This is a very interesting book of 582 pages. It has many beautiful illustrations, many of them representing historical events going back 300 years before Christ. We make the following quotation from a part of the book: "When you are ill the physician will be to you a father; when you have recovered from your illness you will find him a friend; and when your health is fully re-established he will act as your protector."—Indian Proverb.

The present volume is the first work published by the Yale University Press on the Williams Memorial Publication Fund. This Foundation was established June 15, 1916, by a gift made to Yale University by Dr. George C. F. Williams, of Hartford, a member of the Class of 1878, Yale School of Medicine, where three generations of his family studied—his father, William Cook Williams, in the Class of 1850, and his grandfather, William Chauncey Williams, in the Class of 1822.

There are few well informed physicians in this country who possess even a slight knowledge concerning the manner in which the science of medicine has attained its present power as an agency of good, or concerning the men who played the chief parts in bringing about this great result. This book deals with the history of these great achievements. The contents of the book are possibly as accurate as history and tradition can be attained at the present day.

In the writing of text-books on general subjects of medicine and surgery there seems to be no place allotted for the history of medicine, and slight attention is given to the history of certain operations and procedures. The same applies to the history of Ethics, which is a broad and interesting subject. The volume is a handsome one and intensely interesting to any one who wants to be thoroughly familiar with the history of medicine from its various standpoints.

My Home in the Field of Mercy, by Frances Wilson Huard. This is the Story of the Glorious Rehabilitation of the Home in the Field of Honour Into a Home of Mercy and Succor for the Wounded French. The Illustrations Are Sketches Made by Charles Buard, Official Painter of the War to the Sixth Army of France. George H. Doran Company, New York.

This book has been remarkably well received. It has been a great success. We need such a book as this. The drawings are exquisitely reproduced with something of the mellow effect of certain French prints of a generation ago. The price is $1.35 net.

Five Hundred Consecutive Cases of Acute Gonorrhea Treated with Vaccines; and a Note on the Electro-chemical Method.—Lumb, in The British Medical Journal, states that after treating a large number of cases of gonorrhea it seemed that the only way of eradicating the disease was to attack it through the blood, in the same way as with salvarsan in syphilis. The administration of many thousand injections of a particular stock vaccine prepared at this hospital brought to light one most encouraging fact, name-

ly, the appearance of a visible discharge from the urethra or signs in the urine shortly after the injection of a moderate dose when the cure was not complete, or in other words, when the patient was not free from active gonorrhea. This is referred to in Colonel Harrison's manual on the subject as one test of cure, and in my experience it has proved very valuable. The return of the discharge can only be due to gonococci reappearing at the surface of the urethral mucous membrane, and it is reasonable to suppose that the vaccine has reached them through the blood stream, rendered them uncomfortable, so causing their migration from the deeper tissues to the surface. This, then, is a means of attacking the gonococci through the blood stream in the acute stage of the disease, and of penetrating tissues which the irrigating fluid cannot reach. By giving suitable doses of vaccine the hostility of the blood is increased to a maximum, while irrigation washes away the inflammatory products. The administration of a vaccine as a routine form of treatment in the acute stage of gonorrhea has not up to the present been generally adopted, and he has thought it worth while to bring the results to notice. Both in regard to dosage and the period of time between successive injections experimental evidence had to be accumulated, and the effect produced by varying these two factors was observed in several hundred cases before finally deciding in favor of the method now to be described, which differs considerably from that usually adopted in the chronic stage. In the first fifty cases treated the discharge had been present for at least a week before the patient presented himself for treatment and the disease was consequently well established. The rationale of the method used is as follows: (1) To affect the blood as early as possible, with a view to (a) Antagonizing the gonococcus; (b) diminishing the likelihood of complications. (2) To get as big an action as possible in the shortest time without inducing a negative phase. Two main lines of treatment were adopted: Intensive dosage with a mixed stock vaccine of gonococci and staphlococci, and weak irrigation on Janet's system. After the treatment of the first fifty consecutive cases, Lumb revised the method of treatment, which is as follows: On the first morning after admission a two-glass urine test is made, the urine of six or seven hours being passed into two conical glasses on rising in the morning. About four ounces are passed into one glass and the remainder of the bladder contents into the second one. The patient stays in bed for the first three days, getting up only to irrigate in the morning and again in the afternoon. Milk diet is ordered and an unlimited quantity of barley water allowed. Aperients are given regularly as necessary to keep the bowels freely open. Irrigation is commenced with 1 in 8,000 potassium permanganate on Janet's system, the container being placed five feet above the patient, who is instructed to thoroughly wash out the anterior urethra first and then to get the solution into the bladder. A dose of 50 million gonococci with 150 million staphylococci is given on the first morning, and urotropine, according to the following formula, for five days: Urotropine gr. x, Aq. ad 3j, Ac. sod. phosphat. gr. xx, Potass. citrat. gr. x, Syr. aurant, 3 ss, Inf. buchu ad 3j. Dose: One ounce of each, mixed just before taking, three times a day. On the second day irrigation is carried out morning and afternoon as before, and the vaccine is given again on the third morning, the dose being 100 million, or 2 c. cm. By the fourth day the discharge in most acute cases has diminished to a small drop and the patient is allowed to get up and go about as usual, taking a moderate amount of exercise. He now irrigates with 1 in 6,000 potassium permanganate, and the diet becomes an ordinary one, except that fish or a small quantity of meat is allowed, alcohol and condiments being forbidden. On the morning after getting up a four-glass urine test is made and used as the guide in further treatment. On the sixth day the medicine is stopped and another dose (100 million) of gonococci given, irrigation being continued as before. The patient then passes a two-glass urine test, as already described, on alternate days, and the treatment is modified as considered necessary. On the ninth day he receives 100 million gonococci, and a bougie is passed on the tenth day, the urethra being massaged if the glands are involved. The bougie at this stage is valuable in three ways: (1) It allows the massage of Littre's glands. (2) It reveals any tendency to stricture. (3) It has a stimulating effect on the mucous membrane. On the twelfth and fifteenth days two more doses of 2 c. cm. are given. The urine in both glasses is clear, though the first one may still contain a few flakes. The patient at this stage is taking as much exercise as possible, playing games every afternoon and eating a full diet. If under these conditions no discharge be

apparent, the irrigation is changed to 1 in 1,000 zinc sulphate or 1 in 4,000 zinc permanganate for two or three days, and then all treatment stopped. The urine is examined as before and a final dose of 50 million gonococci given two or three days after all treatment has ceased. If the patient be not free from active gonorrhea, this "provocative" dose invariably gives rise to signs in the urine, or an obvious discharge within 24 hours, and this is a most valuable test. If the urine remain clear after this, the case is watched for another three days and then considered clear. No further injections are given for ten days. At the end of that period a second course of six injections may be commenced, the dose remaining at 2 c.cm., and the interval between each injection being two clear days. Many cases require one course only, others two, the latter particularly when complications are present. At the end of the first course of vaccines the two-glass urine test usually shows that the patient is practically free from discharge, apart from a little muco-purulent secretion in the morning. Irrigation is continued until nothing is seen at any time, even after vigorous exercise, and then stopped altogether. The test dose of vaccine (100 millions) is given, and the urine examined for six or seven days afterward. If no discharge reappears the patient is considered to be clear. Owing to existing circumstances it has not been practicable to examine urehtroscopically every patient before leaving hospital, but in a considerable number this was done. With regard to the second course, it should be made clear that the whole of the six injections are frequently not required. When the urine is free from flakes and no discharge is seen at any time, irrigation is stopped and the test dose of vaccine applied. Should a discharge reappear, indicating that the disease has not been eradicated, the remaining number of vaccines to complete the six is given, and then a second interval of ten days allowed to elapse. Irrigation and local treatment have been carried out in accordance with the original scheme. The results of 500 consecutive cases show that 278 cases were uncomplicated, while 222, or roughly 44 per cent. were complicated. This is accounted for by two factors: (1) Active service; (2) lateness in reporting. A patient contracting gonorrhea often does not realize the condition until the discharge is profuse, and during that time a spell of hard work will do much harm. Also a number delay reporting to the medical officer in the hope that the discharge will disappear. Thus of 101 epididymitis cases in the series of 500 acute cases 70 were present on admission and 8 of the 10 arthritis cases. Of the prostatitis cases the exact number present on admission cannot be stated, since routine examination of the prostrate was not carried out until the end of the second week of treatment. An analysis of the uncomplicated cases shows that 60 per cent. were under treatment 30 days or less, with an average of 19 days. The average duration for the whole of the uncomplicated cases (278) was 35 days, or 5 weeks. The complicated cases show clearly the importance of thorough treatment of the prostate, the cases of prostatitis requiring, on an average, 10 days longer than those of arthritis, and 22 days longer than those of epididymitis. The longest cases of all were those in which acute prostatitis was followed by acute epididymitis, this group forming 3 per cent. of the total. The average stay of all complicated cases was 52 days, or several days under two months. It has from time to time been suggested, though never with adequate proof, that vaccines are dangerous in the acute stage, and lead to complications. If this were so it would have been expected that in this series of 500 acute cases, all treated from the start with big doses, a large proportion of complications would have developed, especially epididymitis and arthritis. This is not the case. Of the 101 epididymitis cases 70 per were present on admission, leaving 31 developed out of 430 cases, that is, 7 per cent. Of the 10 arthritis cases 8 were present on admission, leaving two developed out of 490 cases that is less than 1 per cent. The most remarkable feature of all is the exceptionally low percentage of relapses. Out of the 500 cases two only have occurred during a period of 4 months after completion of the series. Many of the cases left hospital more than 6 months ago. This gives a relapse of less than 1 per cent. It is a very satisfactory proof of the value of vaccines as a test of cure, and although by omitting it the number of days under treatment could be reduced in many instances, the relapse rate would very soon counterbalance any gain. At the present time everything possible has to be done to minimize the number of relapses of gonorrhea cases, and this system has been found, in actual practice, to be far in advance of any other; while the number of days under treatment compares favorably with any known figures.

Pneumococcal Meningitis.—Worster-Drought and Alexander Mills Kennedy, in The British Medical Journal, based their observations upon a study of nine cases of pneumococcal meningitis which came under their direct care, the ages of the patients varying between the wide limits of three months and forty-nine years. In five cases the disease was the so called primary form—that is, no lesion conceivably due to active pneumococcal infection was discovered elsewhere. This diagnosis, in three cases, was confirmed by postmortem examination; in the remaining two an autopsy was not obtainable, but, clinically, no other lesion could be detected. In four cases meningitis occurred as a secondary infection. From the day of onset the course of the disease varied from three to fifteen days' duration in different cases. With two adults, aged twenty-two and forty-one, both cases of the primary form confirmed by postmortem examination, the course of meningitis was extremely acute, lasting only three days; the temperatures were never below 101 deg., and often reached 104 deg. Five other cases were also acute; the one in which, postmortem, the sphenoidal sinus was found filled with pus died four days after the commencement of headache. Both the children in whom meningitis occurred secondarily to lobar pneumonia, lived only two days after the appearance of meningeal symptoms. In none of the above cases did any lasting improvement follow the evacuation of cerebrospinal fluid from the intrathecal space. A man, aged twenty-three, in whom meningitis occurred secondarily to otitis media, ran a course of nine days' duration, being continually delirious in spite of the daily withdrawal of 55 to 100 c. c. of cerebrospinal fluid, before sinking into coma. An infant of three months also continued for eight days acutely ill and with occasional convulsions. The courses of two other cases, both primary forms, were somewhat subacute; one was an infant, aged four months, who lived for twelve days with retracted head, arched spine, and occasional vomiting. Towards the end convulsions were frequent. The second subacute case is deserving of special mention. Meningitis having been diagnosed by the rigidity of the neck muscles, Kernig's sign, etc., its causative organism can only be determined by bacteriological examination of the cerebrospinal fluid. Even in the presence of pneumonia meningitis is not necessarily pneumococcal, as, in occasional cases of cerebrospinal fever, a broncho-pneumonia may at first mask the meningeal symptoms. The majority of the cases described above were sent into hospital with a diagnosis of cerebrospinal fever; it was only upon finding pneumococci in the cerebro-spinal fluid that their true nature was revealed. It is frequently possible to diagnose tuberculous meningitis clinically but, at the present time, it is safer to regard any other examples of meningitis as meningococcal until proved otherwise. The treatment of pneumococcal meningitis is at present most unsatisfactory. The nine cases recorded here serve to demonstrate the failure of repeated lumbar puncture. Each patient was punctured at least once daily, and in some cases every twelve hours, the subarachnoid space beng drained on each occasion, until practically no more fluid would flow.A s a result of the drainage the symptoms were occasionally alleviated for a time, but the ultimate result was not affected. Vaccines may be of value, but it is seldom that a case lasts sufficiently long for vaccine therapy to have an effect. They found hexamine of no value in the treatment of meningitis. Since the chief therapeutic properties of the drug appear to be due to its oxidation into formaldehyde, which takes place only in an acid medium, it probably has little or no action in meningitis. In the course of the chemical examination of numerous samples of cerebrospinal fluid from cases of meningitis, they found less than 2 per cent. giving a very faintly acid reaction. The fluid is usually faintly alkaline, but occasionally neutral; the indicators used were litmus, phenolphthalein and methyl orange. Hexamine can be detected in the cerebrospinal fluid within an hour of administration by the mouth, but the Burnam-Ramini test fails to demonstrate the presence of free formaldehyde. Lamar, working with monkeys, showed that sodium oleate attacked and dissolved pneumococci, and when combined with a specific anti-pneumococcic serum had a decided therapeutic effect on pneumococcal meningitis, even when the organisms were multiplying in the blood stream. The action, however, is restricted to the particular type of pneumococcus from which has been produced the immune serum in the mixture of serum and sodium oleate. When the infecting pneumococcus was different in type from that represented by the immune serum no therapeutic action resulted. When, therefore, a satisfactory polyvalent immune serum is forthcoming the most promising method of treatment

would seem to consist in the intrathecal injection of the antipneumococcic serum mixed with a solution of sodium oleate.

Miscellaneous.

Freud's Psychology of the Unconscious.—Rivers, in The London Medical Lancet, considers it possible, even probable, that the practical application of Freud's theory of the unconscious in the domain of medicine may come to be held as one of its least important aspects, that it is perhaps in other branches of human activity that its importance will in future be greatest. Rivers' own belief in the value of Freud's theory of the unconscious as a guide to the better understanding of human conduct is not so much based on clinical experience as on general observation of human behavior, on evidence provided by the experience of friends as well as observations of his own mental activity, waking and sleeping. The feature which makes Freud's theory noteworthy is his scheme of the nature of the opponents in the conflict, and of the mechanism by which the conflict is conducted. Another concept characteristic of Freud's psychology is that of dissociation, but the idea is older than Freud and forms part of systems of psychology very different from his. The special merit of this theory in this respect is that it provides a psychological theory of dissociation, of the factors upon which it depends, and of the processes by which its effects can be overcome. According to Freud forgetting is an active process, not negative as heretofore taught. In considering the Freudian theory of the unconscious with reference to the neuroses of the war, Rivers states that fate seems to have presented an unexampled opportunity at the present time for the testing out of these theories. His opinion is that so far as the theory and clinical methods founded upon it are concerned, both are largely doomed to disappointment, since they seem to be inadequate as a means of explaining and treating those disorders for which the theory was originally designed. Certain features of the situation must be taken into account before any conclusion can be accepted. First, it must be noted, that while the proportion of the population from which cases of war strain are now being drawn is very large, it is not wholly representative, but has been selected, perhaps in a rough way, by the medical examination preliminary to enlistment. Another and more important reservation deends on the fact that warfare tends to produce states of anxiety and apprehension so deep-seated and far-reaching that they obscure causes of a different kind. Cases arising out of the war do not for this reason furnish satisfactory material whereby to test the truth of the Freudian position. Persons who break down under the strains of ordinary life in whom other states are not hidden by the overpowering emotional conditions arising out of modern warfare provide material which shows far more readily the influence of unconscious factors of the kind which are held to be so important by the Freudian school. Even when the reservations are taken into account, there remains singularly little to support the Freudian position in the form in which it is usually presented to us by its advocates. Rivers' experience shows this to be particularly true in regard to the part played by sexual experience in the production of the functional disorders arising out of the war. Those forms of paralysis and contracture, phobia and obsession, regarded by the Freudians as the result of repressed sexual tendencies occur freely in persons whose sexual life seems to be wholly normal and commonplace, singularly free from those sexual repressions which are so frequent in modern civilization. Certainly, if results are any guide, the morbid states disappear without any such complexes having been brought to the surface, while in other cases the morbid states persist in spite of the discovery of definite complexes, sexual or otherwise, going back to times long before the war. Denial, however, of the validity of Freud's theory of the unconscious in the form currently held by its adherents as the means of explaining nervous and mental disorders is something very different from the denial of the validity of this theory altogether. While the Freudian types of mental and nervous cases are few among the cases arising out of the war, there is hardly a case which this theory does not help us the better to understand—not a day of clinical experience in which this theory may not be of direct practical use in diagnosis and treatment. While the results of warfare provide little evidence in favor of the production of functional nervous disorders by the activity of repressed sexual complexes, Rivers believes that they will be found to provide abundant evidence in favor of the validity of Freud's theory of forgetting, the most

striking and characteristic feature of his psychology. Rivers shows that with reference to line of treatment used in the neuroses of war, the Freudian plan of freely discussing the painful experience and an attempt of readjustment by the individual, who has so suffered, carries out the practical side for good results, in many cases, rather than the generally accepted plan of attempted dissociation, of repression of the painful experience. Rivers concludes by stating that Freud's theory of the unconscious should appeal to the physician in that it provides him with a definite working scheme of influences, which he has long known to be active in the causation of mental disorders and of bodily disorders traceable to mental factors. The great merit of Freud is that he has provided us with a theory of the mechanism by which this experience, not readily and directly accessible to consciousness, produces its effects, while he and his followers have devised clinical methods by which these hidden factors in the causation of disease may be brought to light. Freud's psychology of the unconscious provides a consistent working hypothesis to aid in attempts to discover the role of unconscious experience in the production of disease. As it now stands the scheme is but a partial truth and will suffer many modifications with further research, but Rivers believes that it aims in the direction of the truth.

A Comparative Study of the Reactions to Human and Bovine Tuberculin Applied by the Method of Von Pirquet in Cases of Tuberculous Disease of the Bones and Joints.—Gauvain, in The British Medical Journal, states that the work here reported was done for the Local Government Board, London. Bacterial reports were made on 116 cases of children suffering from tuberculous bone or joint diseases. As a matter of interest it was decided to undertake a quantitative investigation of the von Pirquet cutaneous test on such of these patients as were available to check the reactions by color photographs and to endeavor to ascertain: (1) Whether the reaction to cutaneous inoculations of tuberculin was constantly present in patients suffering from undoubted tuberculous lesions of the bones or joints—that is, in patients from whose lesions the tubercle bacilli had been isolated. (2) If not constantly present, under what circumstances the reaction would not appear. (3) Whether by using both human and bovine tuberculin for the von Pirquet test it would be possible to ascertain, from the reaction which followed, whether the patient was suffering from tuberculosis of human or bovine origin. (4) Whether the degree of reaction gave any indication of the severity of infection. (5) The extent and nature of the reaction. The von Pirquet test was applied to 80 out of the 116 cases. In order to avoid any risk of unconscious bias the inoculations were made and results recorded without the knowledge of bacteriological reports as to the type of bacillus found. The tuberculins employed were Koch's "old tuberculin," prepared from the "human" type of bacilli, and his tuberculin prepared in identical way fro mbacilli of bovine origin. The tuberculins were applied to suitable skin scarifications in dilutions of 1-64, 1-16, 1-4, and in full strength, each in approximately equal bulk and controlled by inoculation of a scarification with the same quantity of sterile normal saline solution. In the majority of cases the scarifications were made on the anterior surfaces of both thighs; where the legs were not available both arms were used. In every case a minimum distance of at least two inches existed between any one scarification and its nearest fellow, so that adjacent reactions should not become confluent. To mnimize the possibility of tuberculin applied to one scarification being conveyed by the lmphatic channels to a neighboring scarification which had been treated with a weaker solution of tuberculin the solutions, commencing with the control, were applied to the scarifications in order of increasing strength from the distal to the proximal extremity of each limb. Human tuberculin was always applied to scarifications on the right side of the body and bovine tuberculin to scarifications on the left side. The control solution and the tuberculins were all applied to the scarification marks with sterile glass eye-rods of the same size, a separate rod being kept in each bottle. In this way approximately the same quantity of liquid was applied to the center of each scar. The solution was simply placed on the scar, not rubbed in. The bottles containing the solutions of tuberculin were all placed on one tray in ascending order of strength. On the right-hand side of the tray was the human tuberculin, on the left the bovine. In the middle was the bottle containing the control solution. The bottles had distinguishing colored labels as a further safeguard against the possibility of introducing the

wrong solution into the various scarifications. Gauvain states also that the final result of the investigation may be stated briefly as follows: (1) Local reactions to inoculations of both human and bovine tuberculin were invariably present in all patients from whose pus tubercle bacilli had been isolated. (2) Though reactions were invariably present the degree of reaction varied within wide limits. (3) Weakly and cachetic patients usually reacted feebly, quite irrespective of differences in the severity of their local lesions. (4) Strong and vigorous patients exhibited wide differences in the degree of their reactions, irrespective of differences in the extent or the severity of test was not found to be of value in forming an estimate of the severity of the infection, and was of little prognostic value. (6) It was impossible to differentiate the type of tubercle bacillus with which the patient was attacked by the nature of the reaction to the tuberculin employed.

Septic Peritonitis: Treatment by Caecostomy—Nyulasy (Brit. Jour. of Surg.) states that in the fully developed clinical picture of septic peritonitis there are two constants, viz.: (1) Intestinal paralysis and (2) toxemia. There are two more or less distinct pathological types, namely (1) with extensive inflammation of the peritoneum and little or no free fluid in the abdomen, and (2) with much free fluid but little inflammation. Qualitatively, intestinal paralysis and toxemia are the two clinical constants. Such symptoms as distention, vomiting, fever, and pain may or may not be prominent features. Distention is often marked but there are cases in which it is absent and the abdomen may perhaps be scaphoid. Vomiting is frequently a striking symptom and is usually of the regurgitant type. The vomitus often consists of dirty looking, ill-smelling fluid, with solid black specks distributed through it. The bowels are usually constipated but in some instances actual diarrhoea is present. The temperature is a variable sign but is usually subnormal. In the author's experience, pain in the diaphragmatic region is a bad sign.

From the preceding facts, it will be seen that the only absolutely constant feature of septic peritonitis is the progressive general deterioration.

Quantitatively, intestinal paralysis and toxemia vary directly the one as the other. Much evidence might be advanced to support the view that the intestinal paralysis leads to the formation in the bowel of a virulent toxin.

Fro mtwelve to twenty-four hours after an operation on a septic focus within the abdomen, when the effects of shock and anesthesia are usually passing off, the patient, instead of beginning to improve, may rapidly and progressively go down hill. He may look distressed, color may not be good, perhaps assuming a dirty pallor with the suspicion of darkening of the lips. There may be drying of the tongue, a great thirst, together with restlessness, anxiety, complaint of weakness and abdominal pain, while vomiting, instead of diminishing, becomes more urgent. Pulse may rise to 120 or more, tension poor; and respiration to 28 or 30 or even higher. The abdomen may be distended and show little movement, although in some cases diarrhoea is present. Iw over a period of a few hours the records show that the pulse and respiration and rates are rapidly increasing and that the pulse tension is falling, while the general condition is steadily deteriorating, the paralytic ileus of septic peritonitis may be definitely diagnosed. With the establishment of these signs of deterioration, though vomiting or even distention is absent and though actual diarrhoea is present instead of constipation, the patient will inevitably die, unless intestinal drainage be promptly instituted.

The only true index of the urgent need for intestinal drainage is the rapidly progressive general deterioration, as indicated by the high and increasing pulse and respiration rates, the fall of blood pressure, the drawn, weary expression, the prostration, the dirty pallor, the lividity of the lips, and the cold, clammy, tremulous hands. In treating septic peritonitis it is to be clearly borne in mind that a virulent toxin in the paralyzed bowels is rapidly killing the patient and that there is only one certain method of removing the toxins, namely, by opening the intestines and draining them, always provided that before doing so the septic focus is eliminated. Nyulasy has found from his personal experience that caecostomy is the best procedure but if this does not relieve the condition, drainage of the bowel higher up should be instituted.

Ipecac has long been favorably known to the medical profession. Its value has been recognized by many practitioners in the treatment of amebic dysentery, as an hepatic stimulant and as an intestinal antiseptic.

War Edema.—Maase and Zondek (Berl. Klin. Woch.) give an account of the disease as they have seen it in Berlin. The first cases occurred in January, 1917; males above the age of 40 years have been almost exclusively the sufferers. No noteworthy premonitory symptoms were observed, but suddenly great edema developed ,especially of the lower limbs. The face and scrotum were often affected also, and in a small number of instances ascites and hemothorax occurred. There were no cardiac symptoms, and the urine never contained any albumin. As soon as the patient was put to bed a very marked diuresis at once began, and the edema quickly disappeared. Remissions and recurrences were fairly common. The composition of the edema fluid in these cases had been compared chemically with the fluid effusions such as hepatic cirrhosis. The chief difference found was the high ammonia figures in the Kriegsodem, as contrasted with the two other conditions. The pulse rate was markedly slowed during the disease, and examination of the blood gave, as a rule, a red count of three to four millions. This condition of anemia it was thought might probably be ascribed to hydremia. The occurrence of diarrhea was fairly common. The doctors, in agreement with others, consider the cause of the disease to be underfeeding, especially the diminished quantity of fat. They suggest that toxic products of albuminoid metabolism may cause damage of the endothelial lining of the blood vessels, and so lead to edema. The high residual nitrogen and ammonia values found in the blood, urine, and edema fluids were considered to be evidence in favor of this hypothesis. By giving three patients 100 grams of fat daily for a week the authors were able to cure the disease completely without rest in bed or any other remedial measure. Another factor suggested as of etiological influence is the amount of fluid ingested. Owing to the changed food conditions most of the sufferers had been taking a more watery diet than normally in the shape of soups ,turnips, and so on. The regulation treatment of the condition consists of rest in bed until all swelling has disappeared, diminution of the daily fluid intake, and bettering as far as possible of the diet. Schiff (Muench. Med. Woch) says that the disease appeared in iVenna with great suddenness. He gives the usual pulse rate as from 42 to 56, and states that the amount of urine passed daily during the stage of recovery was commonly 3 to 4 litres. He suggests that this purely war disease has obvious similarities with beriberi and other diseases depending on failure of vitamines. Numerous authors have described the same disease as it occurs in the camps of prisoners of war, pointing out clearly its cause and the means that may be taken to remedy it when there is the will to do so.—British Medical Journal.

The Early Treatment of Gunshot Fractures of the Thigh.—Max Page and Le Mesurier (British Journal of Surgery) state that the primary operative procedure in gunshot wounds of the thigh, should be the establishment in all cases of satisfactory drainage once and for all and at the earliest possible moment after the injury. Repeated anesthetics and operations during the early period are to be deprecated in the treatment of these cases. The necessary procedure should therefore be effected at the casualty clearing station, where in any case the patient is anesthetized for cleaning up and the application of a splint. If practicable, the surface of the whole wound tract should be excised; excision on incision of the skin wounds alone is a useless procedure. All fragments of bone lying loose should be removed; if left, they are a frequent source of persistent local infection; and there appears to be no doubt that so long as the periosteum is not unduly damaged perfect union results, despite the loss of considerable amounts of compact bone. The writers prefer to pack the wounds so treated with dry sterile gauze. In the earlier cases of the series they employed tube drainage down to the bone from the posterior wound, but the limitation of infection seems to be better effected with the simple gauze pack. If the original wound or wounds do not furnish posterior drainage, a 4-inch incision should be made on the postero external aspect of the limb, and access gained to the seat of fracture along the line of cleavage between the outer hamstrings and the vastus externus, a part of the latter will have to be cut away in order to make the opening a free one. The gauze pack should be left undisturbed for two or three days, in the absence of signs spreading infection; it should be removed and lightly renewed at intervals for a week or so, at the end of this period, in favorable cases, no further mechanism to keep the wound open will be necessary. A tube drain through the posterior hole down to the bone should be employed when there is evidence of continued osteitis and retention of discharge. In these latter cases

a considerable saving in outside dressings may be frequently effected by passing the tube between two support slings and allowing the discharge to drip into a porringer. The outside dressings should be changed every twenty-four hours while acute infection is still active. During all processes the limb should be moved as little as possible, and it should never be necessary to roll the patient on his side for any purpose.

The Scabies Problem in War.—MacCormac and Small (British Med. Jour.) writing on the question of scabies among soldiers, state that of all skin diseases among soldiers scabies is the commonest with the exception of pediculosis. It differs in type from that usually met with in civil practice and unless the differences are appreciated the cases in many instances will not be recognized, leading to dissemination by undetected carriers.

The eruption is distributed much in the usual fashion, the sites of election being the wrists, hands, penis, lower abdomen, anterior axillary borders, elbows and buttocks. The characteristic interdigital furrows are rarely seen. Vesicles are more common. In the majority of cases the penis is involved. The secondary lesions due to coccal infection may be so severe as to mask the primary disease. Most common is a variety of impetigo distributed in a characteristic manner on the lower buttocks, elbows and knees. The presence of crusting or pustules on one or all of these regions should at once suggest scabies.

Boils and other follicular infections are frequent and tend to recur indefinitely so long as the primary scabies remains uncured. Some degree of adenitis is the rule in all cases of scabies which have developed any coccal infection. Dermatitis as a complication of scabies is usually the result of unsuitable, misapplied or too long continued treatments.

Treatment.—Sulphur is the most efficient remedy and because of its procurability and cheapness is most suitable for the extensive requirements of an army. The sulphur ointment is preparation employed. The patient is first given a hot bath and provided with plenty of soap and a moderately stiff brush. After removing the soap and drying a liberal quantity of sulphur ointment is rubbed vigorously over the patient from the neck downwards, special attention being given to the affected parts. The inunction is repeated twice daily for three days, until the patient has had six applications. Finally, on the fourth day, not before, a second bath is given and all the patient's clothing sterilized (the bedding also) to prevent re-infection. Even such articles as wrist wraps, identity discs, gloves, etc., must be included.

Should any doubt of a cure exist a 2 per cent. betanaphthol in vaseline may be used daily for four more days. Only under exceptional circumstances should sulphur ointment be used longer than three days because of the liability from its continued use.

Case of Heart Failure During an Operation for the Removal of Tonsils and Adenoids. Heart Massage Through an Abdominal Incision. Recovery.—Mollison, in The British Journal of Children's Diseases, reports a case in which recovery followed after a considerable period of heart stoppage and also exhibited symptoms during the recovery, which have always been followed by death in previous partially successful cases.

The boy, aged six years, was operated on for tonsils and adenoids on account of attacks of bronchitis and asthma. During the administration of the anesthetic of 2 parts chloroform and 3 parts ether the corneal reflexes were not lost. After the operation the boy was apparently in shock. On examination the patient was flaccid, respiration had ceased, pupil was dilated and corneal reflex absent. After stimulation, and the unsuccessful use of Silvester's method of resuscitation, the heart sound could not be heard with a stethoscope even after 0.5 cubic centimeter of pituitrin was injected into the heart.

An incision about 4 inches long in the mid-line was made from the ensiform cartilage to the umbilicus. There was no bleeding, although in the haste the liver was incised also. The heart felt through the diaphragm showed no movement. With the left hand on the chest wall and the right hand behind the heart, left hand on the chest wall and the right hand behind the heart, pressure was exerted about 90 times to the minute. There was no response for some moments, then some respiratory movements began and continued intermittently. The boy's color improved and the pupil contracted to 3 centimeters. But the heart did not contract. One cubic centimeter of pituitrin was injected directly into the heart and massage was resumed. After about 20 more squeezes the heart began to beat strongly.

From an estimation of the time employed the heart was stopped not less than 13 minutes and not more than 24 minutes. For the following 2 weeks the patient showed the symptoms of severe cerebral irritation—rigidity of limbs, choreic movements, meningitic cry, and incontinence of urine and feces, due doubtless to damage done brain during cessation of circulation.

He gives a table compiled from 14 successful cases of heart massage through an abdominal incision. From these and his own case he concludes that heart massage should not be postponed too long, probably not longer than five minutes after heart stoppage has occurred and massage ought always to be carried out through an abdominal wound.

Treatment of Infected Suppurating War Wounds—Morison (British Journal of Surgery) describes the method of treatment infected war wounds as follows: Under an anesthetic, usually open ether, cover the wound with gauze wrung out of 1:20 carbolic acid, and clean the skin and the surrounding area with the same lotion. Open the wound freely and, if possible, sufficiently to permit of inspection of its cavity. In doing this special regard must be paid to nerve trunks and muscular branches of nerves, since the division of blood vessels, excepting the largest, and of muscles themselves, does little harm as compared with the disability following nerve damage. Cleanse the cavity with dry sterile mops, Volkmann's spoon, etc., and remove all foreign bodies. Mop the surrounding skin and the wound cavity with methylated spirit. Cotton wool mops conveying the spirit are used for this purpose, and are introduced on forceps. Fill up the whole wound with the paste known as bismuth iodoform paste, or "Bipp" and composed as follows: iodoform, sixteen ounces; bismuth subnitrate, eight ounces; liquid paraffin, eight fluid ounces, or a sufficient quantity. The powders are mixed together in a mortar, and the liquid paraffin incorporated. The quantity of liquid paraffin required varies according to the bulk of the powders, the bismuth in particular being liable to a considerable variation in bulk. A sufficient quantity should be added to form a paste. It is then advisable to rub down the paste, in small quantities at a time, on a slab with a spatula, to insure freedom from grit and dry particles of powder. Does the wound with sterile gauze and cover all with an absorbent pad, which is held in position by sticking plaster and a bandage. This dressing requires no change for days or weeks if the patient is free from pain and constitutional disturbance. Should discharge come through, however, the stained part must be soaked in spirit, and a gauze dressing wrung out of the same applied as a further covering. At the present time, he does not entirely fill the wound with the paste, but rubs the preparation well into all parts with dry gauze, removing any gross excess.

Redressing is very simply done. After removal of the old dressings the wound is covered with a dossil of wool soaked in spirit, and the sticky dirty looking discharge is wiped off the surrounding skin until it is clean. This is done with dossils of cotton wool soaked in spirit and applied by forceps. Morrison states that so far as he can judge at present all infected discharge comes from the surface of the wound in the neighborhood of the skin. The paste in the depths is clean and should not be disturbed.

A Case of Claustrophobia.—Rivers, in The London Lancet, records the case of a medical man thirty-one years old who was of a very nervous temperament and who suffered from some stammering and a very pronounced form of claustrophobia. The latter condition took the form of being afraid of closed spaces chiefly on account of the possibility of not being able to get out of them should anything happen. This phobia seemed to date from the time when he was six years old and was forced to sleep on the inside of a "box bed." Various attempts to cure the condition by psychanalysis, in which he was told that his trouble was connected with some sexual experience, failed to disclose the true cause of the condition and did not relieve him. Finally by means of a plan of psychanalysis carried out by the author and the patient, in which he was told to remember and study his dreams and recall any events which they suggested, and which did not even mention the possibility of a sexual element, the cause was brought out and much relief resulted. The cause was found to have dated from the time the patient was three or four years old when he was accidentally locked in a dark hallway with a growling dog at its further end. This was followed by several severe illnesses which probably gave occasion for the relegation of the memory to his subconscious. The absolutely free association practiced in the analysis carried out

mainly by the patient himself was what was required to recall the memory. It is emphasized by the author that much harm can be done and many failures recorded when psychanalysis is practised with the obsession that there must be some suppressed sexual element at the basis of the patient's trouble. The only scientific way to proceed is to encourage absolutely free association of ideas without suggestion as to the probable ultimate revelations which will emerge. The associations should be analyzed as they occur and the patient's thoughts then directed somewhat along the lines which seem the most promising.

Radiotherapy of Cancer.—Radiotherapy often gives favorable results in ulcerations of the skin, superficial epitheliomata, tumors of the lymphatic system and in certain round cell or spindle cell sarcomata (Revue de Chimiotherapie). It is best to commence treatment with radiations of half intensity in order to test the reaction of the tumor. If the reaction is unfavorable treatment must be stopped; if the reaction is favorable it is often best to increase the intensity of the radiations. The effects of radium are not constant. In certain cases it seems to produce a cure or at least a very marked improvement while in others it seems to flare up the condition and cause the growth to continue with greater rapidity; in still other cases it seems to produce both these effects and the benefit in the end result is hardly appreciable. However, in superficial cancerous ulcerations and in lupo-carcinoma it generally acts very well and one may usually expect a lasting cure. Furthermore, intra-tumoral injections of sulphate of radium have a very marked analgesic action.

Mesothorium is less expensive than radium, but its activity is very much less than that of radium. tIs technique of application is the same as that of radium and for superficial lesions it may be used without filtration. For deep action, filtration has to be employed, lead filters which allow the ultrapenetrating and the hard beta rays to pass, but absorb the alpha rays and the soft beta rays. One may place the thorium itself in direct contact with the tumor, as in cancer of the tongue, for example.

Thorium X has also been employed, especially in Germany, in the treatment of inoperable cancer or as an adjuvant to surgical treatment. It may be used in intra-tumoral or intravenous injections. In the first instance the mother solution (non-diluted) of the thorium X (activity, one million Mache units) is injected into different points of the tumor. For intravenous injections one part of the solution is diluted with ten parts of physiologic salt solution. The injections are given every eight days. If given oftener they may result fatally.

Renal Calculi and Their Operative Treatment. — Suter (Correspondenz-Blatt fur Schweizer Aerzte) met with thirty-four cases of operative nephrolithiasis during the ten years from 1906 to 1916, although in the preceding five years, while assistant to Professor Burckhardt, he had seen none. The doctor ascribes this not to an increase in the number of sufferers, but to the recent improvements in diagnosis. Seven of the stones were urate, twelve phosphate or carbonate, and sixteen calcium oxalate. The urate caculi were small, they plugged the ureter, and were all infected. The phosphatic were all large, situated in the renal pelvis, often with processes extending into the calcyces, and had inflicted much damage upon the kidney. The oxalate stones seem to be conglomerates of crystals of calcium oxalate which present sharp corners and edges. It is only in hydronephrosis that these stones become round. The danger of relying on a history of renal colic for the diagnosis of renal calculi is pointed out, for this was absent in the majority of his cases; renal colic is caused almost wholly by small, movable stones. Infected renal calculi usually cause no greater subjective troubles than the aseptic ones, except when the infection i svery severe, when its symptoms predominate in the clinical picture. The diagnosis is made mainly through catheterization of the ureters, tests of function, and rontgenographs. The results of nonoperative treatment in the presence of colic, depend on the chemical composition of the calculus. Small stones that give rise to frequent attacks of colic do not need operation as a rule, but occasionally an operation is necessary, particularly when the patient has only a single kidney. The prognosis of an operation depends on the stone and the condition of the patient; prognosis of pyelolithotomy is good and that of nephrolithotomy is more grave because of the possibility of secondary hemorrhage. When both kidneys are affected the prognosis is serious.

Abdominocardiac Reflex and Visceroptosis.—Pron (Paris Medical) lays stress on a high pulse rate in the standing pos-

ture in subjects with faulty abdominal statics. In fifteen out of thirty-two cases of this type the pulse rate exceeded 100 in the standing posture; in eleven it exceeded eighty; in only six was it below eighty. The difference between the pulse rates in the standing and recumbent positions is deemed the best index of the intensity of the abdominocardiac reflex. In only seven of the thirty-two cases was this difference less than ten beats; in twelve it was between ten and twenty beats; in eleven, between twenty and thirty, and in the remaining two cases, thirty-two and forty-eight beats, respectively. Among eighteen subjects with normal static conditions of the abdomen, on the other hand, only three showed a difference exceeding ten beats, and in none did it exceed twenty; in four, moreover, the pulse rate was higher in the recumbent than in the standing position. He agrees with Predel that the abnormal acceleration in the standing position in visceroptosis is due to dragging of the intestines and especially the stomach, on the gastric fibres of the vagus nerve. Undue irritability of this nerve may also, however, be a factor. He advises, in general, that the pulse be counted only with the patient recumbent. In subjects with faulty abdominal equilibrium he recommends the use of a supporting belt, preferably twelve centimetres broad, resting posteriorly on the hips, and pulled rather tight. If the stomach is greatly ptosed, the belt may have to be somewhat narrower to fit in between the stomach and pelvis. In patients whose flat abdomen affords no purchase below the stomach, a pad of flannel or cotton two or three centimetres thick should be attached within the belt. Dyspeptics should have plenty of rest in recumbency, especially after meals, to obviate the harmful effects of intraabdominal repletion.

Physiological and Antiseptic Action of Flavine.—Fleming, in The London Lancet, says that the statement that flavine approaches the ideal antiseptic in that it is not harmful to the tissues and is increased in activity in the presence of serum is based upon inadequate and unsound experiments. As the result of a long series of experiments with flavine to test the various claims made for it and conducted to include a wide range of conditions. Fleming finds that flavine is capable of agglutinating the red cells markedly in dilutions as high as 1:3,200 and has a very marked anti-coagulant effect upon human blood, which may be of value in some cases and harmful in others. Contrary to statements made by others the drug is markedly destructive to leucocytes, and if its destructive action on bacteria is tested in comparison with that on leucocytes for a period of twenty-four hours it can be shown that the latter is far the more pronounced action. The lethal concentration of flavine varies very widely with changes in the number of bacteria upon which it is made to act, and while small numbers of organisms are readily killed by weak solutions of flavine, large numbers of bacteria are not destroyed by high concentrations even after long exposure. In the presence of serum the bactericidal action of the drug is greatly reduced, thus in such a medium staphylococci will grow in the presence of flavine in a concentration of 1:32,000; Bacillus coli in 1:1,000; and Bacillus proteus in 1:2,000. A 1:500 solution of flavine will usually not sterilize an equal amount of pus even in twenty-four hours. It has been recommended that the drug be injected in and about infected wounds to exert a local bactericidal action but the affinity of flavine for the tissues is so great that it has no bactericidal effect whatever under such conditions.

Postseric Tetanus.—Lumiere has laid down ten dicta in respect to failure of serum to prevent the developement of tetanus. 1. The action of serum in preventing tetanus is not absolute. T. The duration of immunity cannot be estimated with precision because of a certain battle which goes on within the organism between the mischievous and defensive forces. 3. Postseric tetanus appears to be due to two principal causes, (a) superabundance of toxin formed in the wound over amounts of prophylactic serum which reach the latter, and (b) liberation of latent tetanus spores either by a secondary surgical intervention or traumatism after the activity of the antitoxin has been exhausted (this refers to late posteric tetanus). 4. Early postseric tetanus, on the other hand, is chiefly due to imperfect sterilization of recent wounds and should be largely preventable; further, it may be well to repeat the injection in suitable cases. 5. Late postseric tetanus may be prevented in over one-half of the cases by an injection of serum before every secondary intervention. 6. In postseric tetanus serotherapy may be seen to modify notably the course of the disease. 7. In 15 cases out of 54

seroprophylaxis prevented the anchoring of the toxin to the nervous centers, so that only the motor nerves of the wounded limb suffered. 8. In 13 cases out of 54 the bulbomedullary centers were only partly protected. Late or incomplete trismus was then present with localized contractures. The prognosis in these cases is none too good. 9 When antitoxin has not protected the nervous centers trismus appears early and the prognosis is grave (26 in 54 cases). 10. Postseric tetanus must be treated by large injections of antitoxin given at the earliest possible moment plus symptomatic treatment. Contractures resist therapy but the paroxysms may be controlled by chloral, morphine, sulphate of magnesia, and persulphate of soda.—Lumiere in Annales de l'Institut Pasteur.

Observations on Spirillar Infections.—Guysez and Pierret (Presse Medicale) refer to three cases in which with an ulcerative and membranous stomatitis due to fusospirillar and streptothrix infection there appeared an eruption of large papules and blebs on the hands and feet and a bilateral conjunctivoblepharitis. The urine, examined in one case, showed numerous spirillar organisms, suggesting that the infection had broken through the pharyngeal barrier and was in some way responsible for the eruption. Both the latter and the stomatitis promptly disappeared under applications of methylene blue in the mouth, with or without potassium iodide. In another series of nine cases, suspected to be tuberculous, the sputum never showed tubercle bacilli but yielded numerous spirilla and streptothrices ;one, carefully examined, showed many spirilla in the stools. In a case of acute and one of subacute laryngitis smears showed the same kinds of infection, and rapid improvement occurred under methylene blue. In all these cases the sputum was fluid and grayish or reddish and had a peculiar stale odor. Attacks of sore throat with mild fever, aching limbs, and slight meningeal symptoms were similarly produced and yielded rapidly to methylene blue. Thus, clinically, the possibility of a spirillosis should constantly be kept in mind. Spirilla and streptothrices seem to reside as saphrophytes in the throat of about one-third of all soldiers; on assuming pathogenicity they multiply enormously. The blood shows a marked mononucleosis. The spirilla are easily shown in smears by prolonged Ziehl staining in the cold or by the Fontana-Tribondeau silver method. To the local treatment with methylene blue and alkaline gargles may with advantage be added potassium iodide and arsenicals internally.

Treatment of Later Stages of Trench Nephritis.—Clarke (British Medical Journal) says that the disease seems to be a diffuse nephritis of the convoluted tubules and is distributed focally in the kidneys. The symptoms are those which might be expected from such a lesion and the course of the condition varies with the extent of the involvement and the rapidity with which different foci clear up. The treatment has been fairly uniform and has given very gratifying results. At first all patients are kept in bed until albumin and casts have disappeared from the urine and there is a fair salt and nitrogen balance; or until there seems to be no prospect of the albumin and casts disappearing. The diet is limited to milk in the very severe cases and in the others it is fixed at two and one half pints of milk, six ounces of bread, one ounce of rice, four ounces, each, of potatoes and greens, half an ounce of butter and one ounce of jam, with fruit occasionally. The food is prepared without the addition of salt, except in the green vegetables. As improvement progresses bread is increased, egg yolk is added, and later small amounts of fish or chicken are permitted. The diet must always be given by weight. Water is allowed freely. Simple diaphoretics, saline or other purgatives, and hot air baths are used when necessary. Nitroglycerin is given when the blood pressure is elevated. Iron follows in the later stages if there is anemia. Where there is deficient secretion of urine Fischer's sodium carbonate treatment is employed, beginning with hourly doses of 0.6 to one gram of pure crystalline sodium carbonate in 250 mils of water and increasing the interval between doses when there is free diuresis. Digitalis and caffeine are also employed, alone, together, or combined with the alkaline treatment when it fails to promote an adequate diuresis. Sensations of great prostration can be much relieved by the administration every four hours of epinephrin in doses of 0.2 to 0.3 mil.

Quinine Anaphylaxis in a Malarial Subject.—Heran and Saint-Girons (Paris Medical) report the case of a man of twenty-five years, infected with malaria five months before in whom the necessary quinine treatment could not be carried out, every attempt to administer the drug

bringing on vomiting, bilious and even blood stained; facial congestion; abdominal pain; violent urticaria of the lower limbs and trunk; dyspnea; hoarseness; and a tendency to edema of the glottis. The phenomena closely resembling those of the anaphylactic shock, Besredka's method of antianaphylactic protection was applied. A preliminary cachet containing five mgm. of quinine sulphate and 0.5 gram of sodium bicarbonate was given and followed in an hour and a half by a cachet with 0.1 gram of quinine. The patient felt only a trace of itching. Later the dose was increased to 0.2, 0.4, 0.8 and finally one gram, each dose being preceded an hour or an hour and a half by the small protective dose. The malarial attacks were rapidly overcome and the patient soon left the hospital in a satisfactory condition. Objections to considering this patient's reaction to quinine as an instance of anaphylaxis on the grounds that nonalbuminoid substances do not cause anaphylaxis and that in this case there had been no sensitizing of quinine are held invalid by the authors. Anaphylaxis has been stated to occur with lipoids, sodium chloride and bicarbonate, and salvarsan, and Richet recognizes a general type of anaphylaxis, in which the system can be sensitized by substances quite different from that inducing the anaphylactic shock. In this patient, moreover, even the drop in blood pressure and that in the number of leucocytes, characteristic of anaphylaxis, were observed.

Ostectomy and Stomatoplasty in the Treatment of Bone Sinuses.—Jayle (Presse Medicale) points out that while a bone cavity, asepticized, freed of sequestra, and filled with bone paste, can in some cases be cured with healing of the skin over it, failures are more frequent than successful results after such treatment. The doctor's own procedure is to bring skin to the bone cavity and allow it to grow down into it without attempting to fill it. The sinus having first been excised, the cavity is broadly opened into with chisel and mallet until all its surfaces are in plain sight. The skin is then loosened for three to five centimetres all around, and U shaped sutures of silkworm gut, with their loops within, are inserted into its margins to carry the latter down to the cut edges of the periosteum, which the sutures include. At each end of the cavity, a small skin flap is made so that it can be similarly "entropionized" and brought into contact with the bone. The wound is then treated with undiluted hydrogen peroxide solution, compressed to arrest bleeding, a one in ten solution of zinc chloride poured in and sponged over the cavity, iodoform gauze packed in, and rather tight outer dressings applied. If, as is occasionally the case, there is marked oozing, pituitary solution is injected subcutaneously. The first redressing is carried out after forty-eight hours and the subsequent dressings daily. Zinc chloride solution, silver nitrate, or tincture of iodine is applied in the cavity every two or three days. Sterilized boric acid powder, aristol, etc., should be used topically in rotation. Sun or artificial light exposures, hot air, and in some cases electrolysis and hydrotherapy, are useful adjuvant measures. An advantage of the procedure is that the redressings cause but little pain, the bone cavity constituting the only open surface.

Treatment of Arteriovenous Aneurysm of the Internal Carotid and Internal Jugular.—Rene Le Fort (Bulletin de l'Academie de Medecine) deems arteriorrhaphy far preferable to ligation of the vessels, with or without resection, in this condition. The doctor reports a case of bullet wound of the neck in which the distressing, constant thrill resulting from the aneurysm led the patient to seek operative relief. A temporary ligature was placed on the common carotid and the greatly dilated jugular vein ligated and cut above and below the orifice of arteriovenous communication. The external and internal vessels being pressed upon by an assistant above the aneurysm, the segment of the jugular vein at this level was split open longitudinally, the arteriovenous opening sutured, and the segment of vein then sutured over it to reinforce the arterial suture. The thrill and head noises at once disappeared. The venous blockage caused facial congestion and somnolence, but these passed off in a few hours, and complete recovery followed. He believes arteriorrhaphy adapted to a large number of cases providing certain principles are adhered to. The operation should, except in an emergency, be postponed a few months, dissection by layers being then easier. The tissues should be freely exposed and dissected as for an anatomical specimen, all vessels and nerves being liberated. Provisional arterial hemostasis should be attended to as in the case reported. The vein being adherent, dilated, and friable, it should be ligated some distance from the lesion.

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Color Changes in the Skin in Gas Gangrene.—The first essential change in the color of the skin, states Wallace (British Med. Jour.), is due simply to swelling of the limb. At this stage the skin looks somewhat tense and is paler than normal owing to the blood being driven out of it by pressure. Simple palor of the skin is succeeded by a dirty cream tint which may be taken to indicate that gangrene is certainly established. From now on the subsequent changes in the skin are quicker and more dramatic. Areas of purple staining appear which enlarge and coalesce. The margins of these are fairly distinct but irregular, and the intervening skin is grayish white in color. Soon there appear blebs filled with fluid which is stained by altered blood. Removal of the cuticle from these exposes a shiny purple-red area of dermis. When this condition of the skin is reached it may be safely inferred that the gangrenous process is so far advanced as to necessitate amputation. In the last stage, finally, the purple is succeeded by a dark yellow-green tint. The late color changes may be influenced according to the relative parts played by bacterial action on the one hand and by arrest of blood supply on the other.

There is another change in the skin, namely, "bronzing," which has attracted considerable notice. This color change is not common on the limbs, but is seen more often on the body especially in connection with wounds of the extraperitoneal part of the colon. Sometimes it is accompanied by crepitations of the subcutaneous tissue. The tissue beneath is sometimes normal or only slightly edematous, sometimes distinctly edematous, sometimes yellow-green in color.

Iontophoresis of Heavy Metals.—Koller (Correspondence fur Schweizer Aerzte) says that when a salt is dissolved in water the solution consists not only of an attenuated distribution of the salt molecules in the water, but also of a splitting of a certain part of the molecules, according to the degree of concentration, into their two components, a basic and an acid part. These parts may consist of one or of several atoms and are electrically opposite. It is assumed that the chemical valence is saturated through union with an electric ether particle, an electron. The electric particles are called ions, and have peculiar properties. The basic parts seek the negative pole in a galvanic current, and are consequently called kations, while the acid parts seek the positive and are called anions. Ions are not formed on, but are discharged from, the electrodes in a nascent state with the chemical affinity free and particularly strong. The doctor has been conducting experiments with the ions of various heavy metals with a view to discovering whether they may be of therapeutic value, and his findings seem to show that they can penetrate into the body, where they become enveloped in a colloid. Koller warns against the use of zinc and copper salts over large surfaces, as in the vagina, but thinks silver is well suited for this method of treatment. The chlorides which silver form within the body are insoluble and therefore not toxic. Metals which form soluble chlorides become redissolved and dissociated into ions whereby a new discharge is caused with the continually new formation of colloids, the result of which is a breaking down of albumin and a toxic albuminuria.

Typhoid Osteoperiostitis.—Weil and Chevrier (Presse Medicale) note that of twelve cases recently met with, seven patients were between thirty and forty years o fage, three above forty years, and only two below thirty. In ten cases the ribs were involved, in one the tibia and fibula, and in one the trochanter. Trauma played a role only in the trochanteric case. In all cases the preceding typhoid attack had been severe and prolonged; only three had received protective inoculations, and in none was the process of paratyphoid origin. In the diagnosis of the condition, the agglutination test is recommended, having given excellent results in eleven cases. All these patients still had high agglutinating power, though an interval of a year, two years, or even more had elapsed since their typhoid attack. In two cases the B paratyphoid organism proved somewhat confusing in the agglutination tests, but its participation as a casual factor was easily excluded by the aggultinin saturation method of Castellani. In the treatment the authors advise, in the slow nonsuppurating forms manifested merely in hyperostosis, increasing doses of typhoid vaccine are to be administered twice weekly and continued for a time after the enlargement has disappeared. In a course of sixteen injections the first dose is 0.25 c. c., and the last eight doses each 1.5 c. c. The first two injections increase the enlargement temporarily; later, it subsides entirely or is greatly reduced.

Systolic Pressure in the Brachial and Tibial Arteries in Aortic Insufficiency.—Heitz (Paris Medical) reports a careful study of the peculiar condition noticed in 1908 by Hill and Flack in aortic insufficiency, viz., a systolic blood pressure, higher in the tibial artery than in the brachial. Of fifty-one cases of aortic insufficiency, of varying origin, under observation, all but seven showed this peculiarity, the tibial systolic pressure averaging forty millimetres of mercury higher than the brachial. The diastolic pressure, however, did not exhibit this difference. The peculiar relationship of tibial to brachial systolic pressure is sometimes temporarily in abeyance in the presence of fever or heart weakness, or may be completely absent where there is obliterating arteritis in the lower limbs. The sign is present in abdominal aortitis and in some cases of arterial hypertension, geerally associated with aortic lesions. It is therefore not of absolute diagnostic value.

Fibroid Disease of the Bursae.—Morris (British Medical Journal) reports the case of a man, fifty-three years old, who was unable to sit down on account of two painful tumors of his buttocks. On examination it was found that he had a solid mass, about the size of a fetal head, over the tuberosity of each ischium and similar smaller solid masses over both tibial tubercles, both olecranon processes, the third piece of the sacrum, and the ulnar aspect at the base of the left thumb. Except for hemorrhoids the physical examination was negative. Both ischial masses were removed by morcellement, and the one over the scarum was shelled out. The ischial masses were dense fibromas, firmly attached to the periosteum, and apparently these and all the others, except the one on the thumb, had arisen from the bursae normally present. The etiology of the condition could not be determined and the growths were regarded as primary nonmalignant fibromas.

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Blood Pressure During Operations on the Wounded Abdomen.—Marshall states that during the course of an ether vapor anesthetic the blood pressure shows a tendency to rise, but if there is much manipulation of gut and mesentery, it will gradually fall. The process may continue for hours without the pressure falling to a dangerous level. Exposure of gut outside the abdominal cavity produces a much more serious effect; if more than two or three feet are exposed, the blood pressure will commence to fall after a few minutes, and will continue to do so rapidly until the gut is replaced. This is seen when stomach and omentum are exposed and even with great omentum alone. The indication is that surgeons should make big incisions and work with the gut lying inside the abdomen as far as possible. Covering the exposed gut with hot saline does not prevent the fall of blood pressure. Exposure of the gut produces far less effect if the patient is not under an anesthetic. Men arrive with several feet of intestine prolapsed through a wound, yet their blood pressure is within normal limits. In one case more than two-thirds of the small intestine had been outside the abdominal cavity for at least four hours, yet this man's blood pressure was 142 mm. of mercury and his pulse rate only 108. The patient recovered.

Apart from copious hemorrhage, there is one other procedure which causes rapid fall of blood pressure in cases of abdominal operations. This is turning the patient on his side. The effect is only seen if the patient has been under the anesthetic for a considerable time before being turned. At the end of an abdominal operation the patient may be in good condition; he is then turned on his side so that the surgeon may excise a wound in the back. In a few minutes there is a fall of blood pressure and the radial pulse disappears. It may be hours before the patient recovers this lost ground. If possible wounds of the back should be dealt with before laparotomy, as turning the patient has no ill effect during the first half hour of an ether anesthesia.

If chloroform be used in these abdominal operations, the blood pressure will fall during administration and for some hours afterwards. The intrathecal administration of stovaine is unsafe, and should not be employed.—British Medical Journal.

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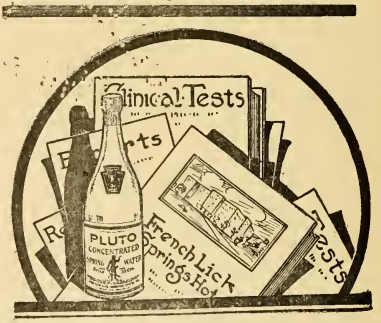

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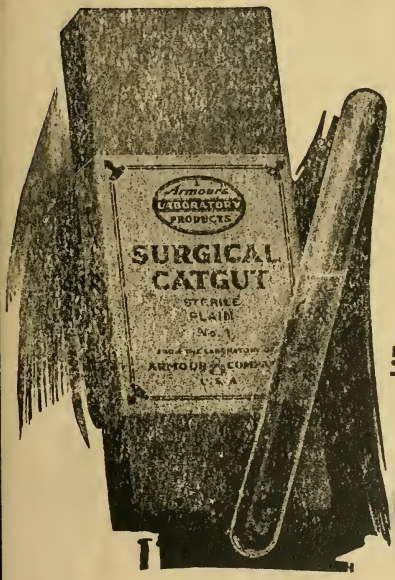

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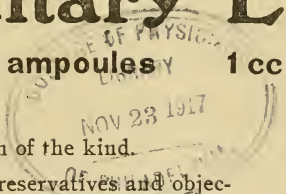

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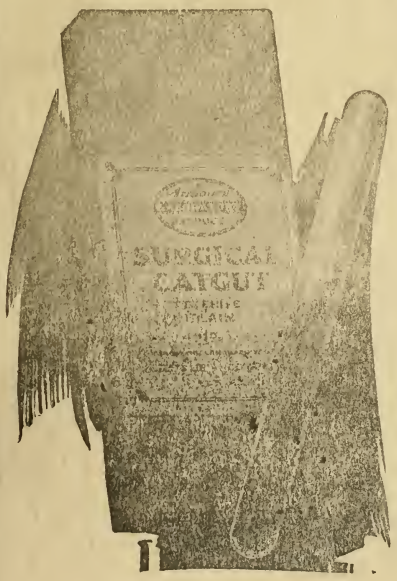

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